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The BRITISH PTERIDOLOGICAL SOCIETY was founded in 1891 and today continues as a focus for fern enthusiasts. It provides a wide range of information about ferns through the medium of its publications and other literature. It also organises formal talks, informal discussions, field meetings, garden visits, plant exchanges, a spore exchange scheme and fern book sales. The Society has a wide membership which includes gardeners, nurserymen and botanists, both amateur and professional. The Society's journals, the *Fern Gazette, Pteridologist* and *Bulletin,* are published annually. The *Fern Gazette* publishes matter chiefly of specialist interest on international pteridology, the *Pteridologist,* topics of more general appeal, and the *Bulletin,* Society business and meetings reports. **WWW site:** http://www.nhm.ac.uk/hosted_sites/bps/

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(**Front cover**: *Asplenium ceterach.* Illustration from: G. Schneider (1905) *Choice Ferns for Amateurs.*)

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NATIONAL FIELD MEETINGS 1999

PRIDDY, NEAR WELLS, SOMERSET – 18-20 June

Nick Hards

Priddy is one of the four lead mining centres in the Mendips, and very handy for many limestone sites as well as being close to the Somerset Levels. It therefore made an ideal centre for our meeting. The many old stone walls and buildings, together with a pond on the edge of the village, meant that we did not have to look very far for most of the commoner local ferns (see table).

On Friday morning we headed into Wells, where the main attraction for a pteridologist is the *Adiantum capillus-veneris*. The main attraction for anyone else is the Cathedral and Bishop's Palace. Since the *Adiantum* is abundant on the moat and walls of the palace, we were able to combine the two. It is not clear why such a rarity does so well here – it is said to be introduced but there are masses of plants in inccessible places where it can only have arrived as spores. It appears to prefer the more open and sunny parts of the walls, and only grows close to the water.

We then visited Strawberry Wood on the edge of the town (31/558457), where *Asplenium scolopendrium* was particularly luxuriant on the lower slopes and *Pteridium aquilinum* flourished on the upper edge. We also tried to get at the larger wooded area around King's Castle, but strayed on to the golf course. There should be a public bridleway, but we obviously weren't on it!

After lunch in Wells we moved on to Ebbor Gorge (31/520485), which is a bit like Cheddar Gorge but without all the people and cars. The usual route from the car park is straight down into the rocky areas, but I had an unconfirmed report of *Hymenophyllum tunbrigense* which I wanted to follow up. The Culm Measures rocks hereabouts are a mixture of limestone and sandstone, with more of the latter at higher levels, and that had to be where the record might have come from. The path upstream was very wet and a particularly boggy area yielded *Equisetum fluviatile*, but there was nothing remotely suitable for filmy ferns. The path then heads east along the top of the gorge but is difficult to find until it meets another path which plunges down into the gorge. This is a spectacular walk with plenty of ferns, although some quite extensive tree felling to let in more light has not improved their lot.

Some of the party then returned to the centre, while the rest of us made a short detour to check out some *Ophioglossum vulgatum* which I had found a couple of years previously near Priddy Nine Barrows (31/539521). The heifers in the field were very friendly, especially when we got down to ground level, but the site did not look very hopeful at first. The field appeared to have been sprayed recently with some hormone weedkiller. However, Alison Paul's expertise came to the rescue and we eventually

found a considerable number of very small plants which had escaped both the grazing and the weedkiller. Curiously, almost all the plants showed no sign of fertile spikes and this appeared to be how they were growing rather than a result of grazing or damage. On my previous visit the plants were larger but I saw no fertile spikes at all.

Saturday morning was spent at Priddy Mineries (31/547515), where lead mining ceased in 1908 and which is now a Somerset Wildlife Trust reserve. Opposite the Stockhill Plantation car park there are a lot of spoil mounds which are still very base metal rich, and with very little soil cover *Botrychium lunaria* is abundant among the short grass. Although the vegetation has recovered since a fire in the peaty ground around the northern lake a few years ago, *Ophioglossum vulgatum* does not seem to have returned to its former site there. Apart from the remains of the sluice at the end of the lake, where we found our first *Cystopteris fragilis*, this very wet area is dominated by the larger ferns including *Dryopteris carthusiana*, and three horsetails.

As we headed towards the mine workings, I was vaguely looking for *Equisetum* x *litorale*, for no better reason than that both parents were so abundant. Most of the party were admiring the *Dactylorhiza* spp. and other flowering plants when Alison drew our attention to some equisetums which had very odd stem sheaths with narrow scarious margins. The first internode on the branches was as long as the stem-sheath (unlike the abundant *E. palustre*), the teeth had black tips and the central stem cavity was very small. Some were also producing cones, and unlike *E. arvense* which has a very rough surface, droplets of water (there was plenty of that about!) did not cling to the stems. We concluded that this must be *E.* x *rothmaleri*. I took some material away and compared it with Chris Page's description in *The Ferns of Britain and Ireland* (1982 edition), and everything seemed to fit including the main associate flora which is very similar to the type area. As we worked our way towards the mine workings I did also find some *E.* x *litorale* near one of the lakes, and we also found several clumps of *Dryopteris* x *deweveri*.

Like many old lead mines, there is an enormously long flue running several hundred yards up the hillside. During the smelting process, sublimates including lead, arsenic and cadmium used to collect in these flues, so workers used to be sent in to scrape the walls. Needless to say, the life expectancy of these people was short! This flue has collapsed in several places and the interior walls are covered in the various lime loving ferns which are also common on the buildings and around the entrances to the adits of the mine. *Asplenium adiantum-nigrum* is abundant here but otherwise scarce in this part of Somerset.

After lunch in Chewton Mendip, we moved on to Ubley Warren (31/505554), another lead mining centre. Before exploring that, however, we walked down Velvet Bottom to Black Rock. Velvet Bottom is again quite wet underfoot if you leave the path, and the horsetails again threatened to steal the show although there was no *Equisetum fluviatile* or *E.* x *litorale*. However, among the masses of male ferns there was one group of plants which caused considerable excitement and which we believe was probably *Dryopteris* x *complexa*. Black Rock is notable for what used to be a thriving colony of *Gymnocarpium robertianum*, which is generally very scarce in the South West. Sadly it only just about seems to be clinging on here and what few plants we saw looked rather stressed. This could be the consequence of a series of dry years, so it will be interesting to see whether this wet summer will help it to recover. All of the commoner ferns, by contrast, were in very good condition.

In Ubley Warren there was plenty of evidence of rabbits and the close cropped grass had quite a few plants of *Ophrys apifera* (bee orchid). This area was the centre of the lead mining industry in Roman times and the workings continued until 1885 when the Mendip Mining Co. ceased operations. The very disturbed areas of spoil could well contain *Botrychium lunaria* but we did not find any. However, there are considerable areas of water worn limestone, and these yielded a good assortment of ferns including *Polypodium cambricum*, as well as many colourful flowering plants including *Thymus serpyllum* and *Helianthemum nummularium.*

The mine workings here proved a rival attraction to the ferns, and we spent some time admiring the remains of the furnace and flue (which, unlike Priddy, doubles back repeatedly on itself). The more modern smelting technique has, on this site, produced vast amounts of glassy slag which now form large mounds around the buildings. This material does not appear to be as readily colonised by plants, and still forms great black scars on the ground. Steve Munyard found a couple of slow worms basking under an old piece of corrugated iron.

photo: N.J. Hards

Paul and Eileen Ruston, Steve Munyard, Keith Holly, Jonathan Crowe and Pat Acock looking at *Thelypteris palustris* on Shapwick Heath.

Sunday was planned as a complete contrast, being spent on the Somerset Levels. In the morning we visited Shapwick Heath (31/424413). This reserve is managed by English Nature, and is probably the classic site for both *Osmunda regalis* and *Thelypteris palustris*. The massive plants of the former and vast carpets of the latter give some indication of what much of the surrounding countryside would once have been like, but the high water level can now only be maintained by pumping. Also notable (when I stopped trying to photograph the dragonflies) was the considerable quantity of *Athyrium filix-femina* which had been quite uncommon until now, and more plants of *Dryopteris* x *deweveri*. As we left, we became aware that we were being watched from across the road by a young fallow deer.

Pteridophytes recorded during Wells meeting, June 1999

	Priddy village	Bishop's Palace, Wells	Strawberry Wood	Ebbor Gorge	Priddy Nine Barrows Field	Priddy Mineries	Velvet Bottom	Black Rock	Ubley Warren	Shapwick Heath	Westhay Moor
Equisetum arvense	x	x		x		x	x		x	x	x
E. fluviatile	x			x		x			x	x	x
E. palustre						x	x				
E. x litorale						x					
E. x rothmaleri						x	x				
Botrychium lunaria						x					
Ophioglossum vulgatum					x						
Osmunda regalis										x	x
Adiantum capillus-veneris		x									
Polypodium cambricum									x		
P. interjectum	x	x	x	x		x	x	x	x		
Pteridium aquilinum	x		x	x		x	x		x	x	x
Thelypteris palustris										x	
Asplenium adiantum-nigrum						x					
A. ceterach	x	x		x		x	x				
A. ruta-muraria	x	x	x	x		x	x	x	x		
A. scolopendrium	x	x	x	x		x	x	x	x	x	
A. trichomanes	x	x	x	x		x	x	x	x		
Athyrium filix-femina				x		x				x	x
Gymnocarpium robertianum								x			
Cystopteris fragilis						x	x	x	x		
Polystichum aculeatum	x			x			x	x	x		
P. setiferum	x		x	x							
Dryopteris affinis agg.		x	x								
D. affinis subsp. affinis				x					x	x	
D. affinis subsp. borreri			x	x		x	x	x		x	
D. carthusiana						x				x	x
D. dilatata	x		x	x		x	x		x	x	x
D. filix-mas	x	x	x	x		x	x	x	x	x	
D. x complexa							?				
D. x deweveri						x				x	x

Lunch at Catcott was so good that we had difficulty in tearing ourselves away to visit Westhay Moor (31/457438), a site where peat working is gradually coming to an end and the Somerset Wildlife Trust are carrying out a major restoration programme. In the older part of the reserve we again saw large plants of *Osmunda regalis*, but for me the real highlight was the sight of many young plants. This is one place where the magnificent royal fern is staging a strong comeback, and the SWT are to be congratulated.

Altogether 17 members attended part or all of this meeting. I would particularly like to thank Jim Jarvis, who did much of the preparatory work. Altogether we saw 26 species and probably four hybrids, the most surprising omissions being *Blechnum spicant*, *Polypodium vulgare* and *Equisetum telmateia*.

ISLE OF MAN – 6-11 August **Rob Cooke & Alison Paul**

Friday saw us embark for the Isle of Man (IoM). Arriving somewhat early for the ferry, we had a quick look around the seashore and found *Osmunda regalis* on the limestone cliffs at Heysham, with both mature plants and sporelings present. On arrival at Port Erin on the IoM we planned the itinerary with the help of Dr Larch Garrad and Dr Liz Charter, and their advice was much appreciated.

Our first stop on Saturday was Glen Mooar (24/304895). Here we found the common woodland ferns of the Island: *Dryopteris dilatata, D. filix-mas, D. affinis* subspp. *affinis* and *borreri, Polystichum setiferum, Athyrium filix-femina* and *Asplenium scolopendrium*. Walls in the glen supported *A. trichomanes* subsp. *quadrivalens*, *A. ruta-muraria* and *Polypodium interjectum*. As we explored further up the glen we found a few plants of *Oreopteris limbosperma* and some tiny *Blechnum spicant* as well as putative *Dryopteris affinis* subsp. *cambrensis* and *D.* x *complexa*. Bracken and *Equisetum arvense* were also recorded.

At Glen Maye (24/230798) we were joined by Liz Charter and family, and a friend of theirs who was to be our guide. Exploration of the woods revealed no additional fern species, so we set off along the cliff path. After a vertiginous descent to sea level we found good colonies of maidenhair fern (*Adiantum capillus-veneris*) and sea spleenwort (*Asplenium marinum*) in sea caves (24/228807), although the largest sea cave was inaccessible due to an incoming tide. A further drive along the coast found us searching for more maidenhair fern in old mine shafts at Niarbyl (24/212775). Maidenhair fern was not seen here, but *A. adiantum-nigrum* was found in a cave and we were rewarded with good views of choughs and grey seals. Before returning to Port Erin we travelled north to Peel Castle to admire the abundant sea spleenwort on the walls.

On Sunday our first rendezvous was at West Baldwin Reservoir (24/359839). We failed to find *Hymenophyllum wilsonii* in Colden Plantation, despite a thorough search. The conifers were dense and the location looked unsuitable, although there remained some doubt about the exact spot, with conflicting grid references from previous sightings (24/356842 or 24/359837). Patrick, using his GPS to guide him to the latter reference, found a more suitable habitat just as we were leaving, but still no sign of a filmy fern. However, a few plants of *Osmunda regalis* were discovered on the east side of the reservoir and *Polypodium vulgare* on a bridge.

After lunch Groudle Glen was explored. In addition to the usual woodland ferns some enormous osmundas were found; they are likely to be relicts of Victorian planting. Next we visited Braddan Bridge (24/365769) where there is a good stand of *Equisetum sylvaticum* beside the old road and handsome plants of *Asplenium trichomanes* subsp. *quadrivalens* on the bridge itself.

Patrick had obtained permission from Isle of Man Railways to look for the *Adiantum capillus-veneris* in the railway cutting at Oakhill (24/353736), so at a time when we were assured that the last train would have run, we began our search. Eventually we found what we had come for, but there were no healthy fronds; the plants seemed to have been the victims of track spraying with herbicides.

photo: A.M. Paul

Pat Acock beside *Osmunda* at Groudle Glen.

More wooded glens were explored on Monday and after much searching we found *Trichomanes* gametophyte in some quantity in Dhoon Glen (24/457865). Despite searching hard in all the other suitable glens visited, this was the only time we saw it. *Trichomanes speciosum* is a new addition to the Manx flora. *Dryopteris aemula* and *Polysticum setiferum* were common here, and a single plant of *P. aculeatum*, noted by Patrick and Andrew Leonard on their reconnaissance visit the previous year, was re-found. More *Dryopteris aemula* was also seen in woods to the north-east near Port Cornaa (24/471886).

In the afternoon we went north to the Curraghs (24/364946), an area of willow scrub with abundant *Osmunda regalis* and horsetails. The royal ferns were magnificent, both in size and quantity, almost forming thickets. Although *Equisetum fluviatile, E. palustre* and *E. arvense* were plentiful, no hybrids were seen. This area is a nature reserve of the Manx Trust, and well worth a visit; it is almost 'primeval' in character with dense undergrowth and no signs of human interference, except for the boardwalks which help one to avoid getting lost.

Our destination on Tuesday morning was Snaefell, the highest peak on the island (621m) (24/397884). Despite an extensive search for clubmosses, only a handful of plants of *Huperzia selago* were found, although *Lycopodium clavatum* and *Diphasiastrum alpinum* have also been recorded in the past. The slopes are heavily grazed, and consequently grassy and not really suitable clubmoss habitat. The only ferns seen were a few stunted plants of *Dryopteris dilatata* and *Blechnum spicant*. The climb to the top was rewarded by distant views of the hills of Cumbria, Wales, Northern Ireland, Eire and Scotland.

Following an abortive hunt for beech fern in Tholt-y-Will Glen, we visited a slate quarry on South Barrule (24/269769) to see parsley fern (*Cryptogramma crispa*) growing abundantly on the acidic slates. Just before her departure and the eclipse of the sun on Wednesday morning Alison found the surprisingly scarce *Asplenium ceterach* on a wall in Port Erin (24/195687).

Although there were only three BPS members, joined by Liz Charter and family for part of the meeting, we had a very pleasant trip, and extend our thanks to Pat Acock for organising it. In total 30 taxa were recorded, the highlights of the trip being Dhoon Glen and The Curraghs. The records have been copied to Dr Liz Charter on the IoM.

WENSLEYDALE, NORTH YORKSHIRE – 18-19 September

(Leader: Barry Wright) **Barry Wright**

Sunday 18 September. Everyone rose on time to start the weekend despite some long journeys by the southerners, and the local brewery offerings. Apart from being the birth-place of Wensleydale cheese of Wallace and Grommit fame, Wensleydale is a wide and expansive dale with many nooks and crannies where ferns can still be found. Many of these are associated with deep gills and their waterfalls. It was almost billed as a weekend with waterfalls, but owing to the lack of recent rainfall it was more like a weekend with a drip.

photo: B. Wright

Sandy Strang, Jonathan Crowe, Alison Evans and Pat Acock
looking at *Asplenium viride* in Cotterdale.

The first site was High Shaw (34/869918). We followed the path lined with *Polypodium vulgare* clothed dry-stone walls. Before crossing the bridge there was *Cystopteris fragilis* along with a few plants of *Polystichum aculeatum*. The fern flora was abundant and diverse, with *Dryopteris filix-mas, D. dilatata, Athyrium filix-femina, Oreopteris limbosperma, Blechnum spicant, Pteridium aquilinum* and *Asplenium scolopendrium*. There were odd plants of *Equisetum arvense* and some *Dryopteris affinis* which seemed to fit morphotype *borreri* best, although we did try to get one plant to fit morphotype *robusta*.

Next stop, after a steam up the road, was High Shaw Quarry (34/869923). This is the only recorded station for *Cryptogramma crispa*. Other treats were to be found in the mining tunnels leading into the hillside. Here we found *Cystopteris fragilis, Asplenium scolopendrium* and a few plants of *A. trichomanes* subsp. *quadrivalens*.

We then had to take the long way round to get to Hardraw Force – the highest single drop waterfall in England. The short cut involves a 35m shear drop. Here we saw the typical range of ferns: *Polypodium vulgare, Polystichum aculeatum, Dryopteris filix-mas, D. dilatata, Athyrium filix-femina, Cystopteris fragilis* and *Asplenium scolopendrium*, with some *A. ruta-muraria* on a wall and what was probably *Dryopteris affinis* morphotype *borreri*. Back to the pub for lunch before the next marathon up Cotterdale's West Beck.

Cotterdale is a quiet dead-end valley at the head of Wensleydale. The beck runs through acidic sandstones and carboniferous limestones which produce the mixed fern flora we recorded. It started with the acidic flora at 34/827942 with *Dryopteris dilatata, Blechnum spicant, Oreopteris limbosperma* and *Equisetum palustre*. After picking up *Pteridium aquilinum, Athyrium filix-femina* and *Equisetum arvense*, along with *Dryopteris affinis* morphotype *borreri*, we came to a more calcareous cliff at 34/826946. Here we saw more *Athyrium filix-femina* along with the typical wall ferns *Cystopteris fragilis, Asplenium trichomanes* subsp. *quadrivalens* and *A. viride*. There were very good plants of the green spleenwort growing in the dripping wet shales of this cliff. There were some birch trees on these cliffs and associated with them were *Polypodium vulgare* and *Polystichum aculeatum*. Another good cliff further up had an equal flora (34/825947).

On the way up to the true limestones, and yet more waterfalls, there was a small waterfall (34/823953) supporting an unusually large colony of *Phegopteris connectilis*. This was a compulsory stop dubbed 'Beech Fern View'.

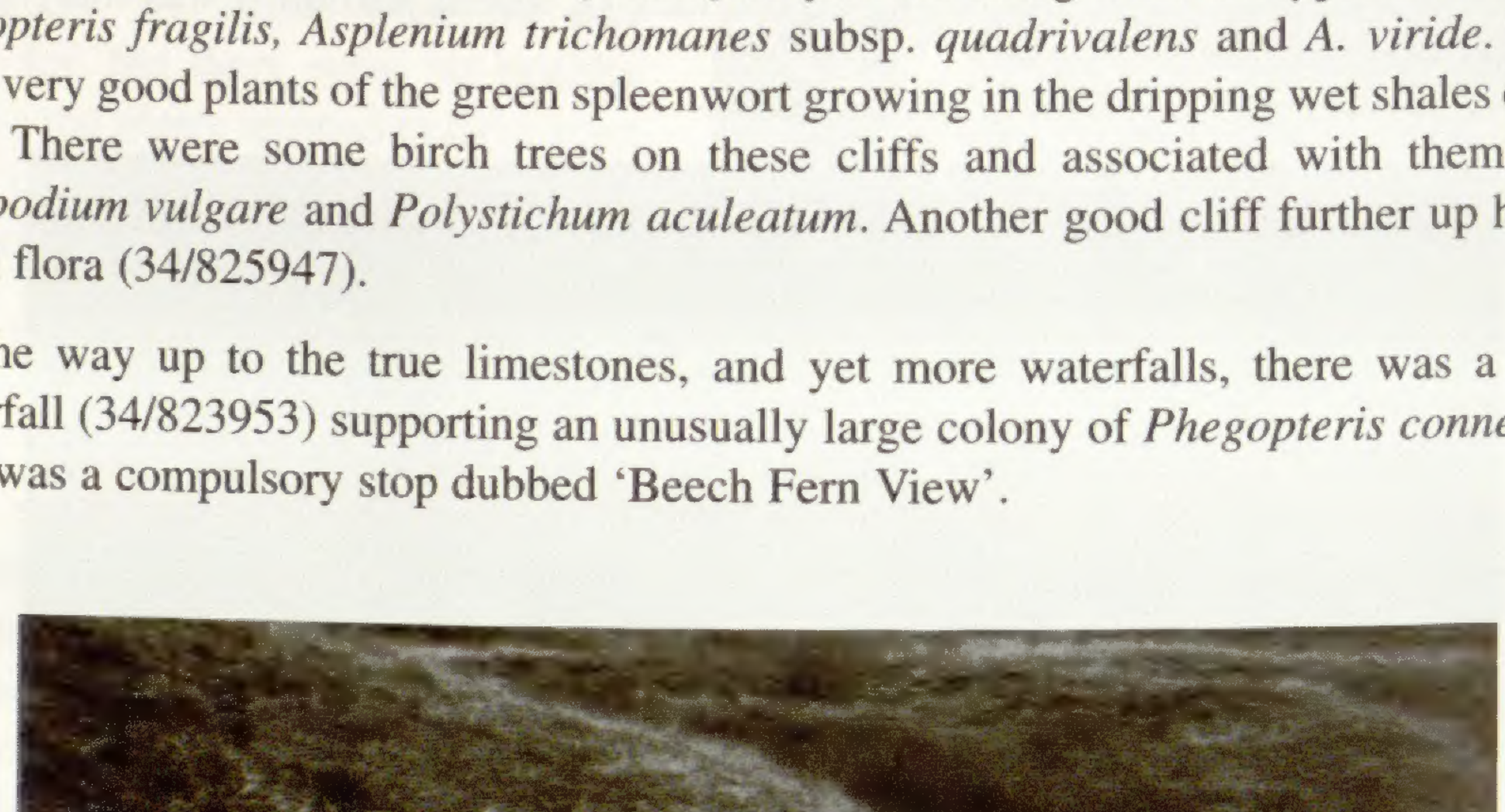

photo: B. Wright

Alan Ogden, Sandy Strang, Jonathan Crowe, Sylvia Martinelli *(back)*, Pat Acock *(front)*, Vincent Jones *(back)* and Ann Robbins *(front)* at 'Beech Fern View', Cotterdale.

The increasingly few adventurers pushed on to the first waterfall (34/822956) and then to the climax of the day, the second waterfall at 34/821960, home to an indecently luxuriant colony of *Equisetum variegatum*. A fault in the cliff was dripping with water, out of the reach of sheep and covered in moss. The horsetail was growing through the moss and curving to stand upright like a miniature horsetail lawn. Well worth the 2.5km walk. The only problem was the walk back across rough, tussocky grass.

The evening was spent nursing wounds and sore muscles along with some learned discussions about hybrid horsetails collected by Pat Acock – obviously from the same rootstock as Ken Trewren. But we couldn't quite agree that we had *Equisetum* x *rothmaleri*. Microscopes were on hand to look at some of the bits we had brought back as well as some spores taken along to show that there are differences between species based on their spore character.

Sunday 19 September. With the fine weather holding out, the day started in Gillfield or Condenser Wood (44/077916) – an allusion to the industrial, mining past of the area. There was a mixed bag of ferns with the geology varying from sandstones to shales and limestone at the top. The ubiquitous *Pteridium aquilinum* was first into the 'bag' followed by *Dryopteris dilatata, D. filix-mas, Athyrium filix-femina* and two morphotypes of *Dryopteris affinis,* viz *affinis* and *borreri*. These were found on the way in and around some of the old buildings in the lower part of the wood. The more able members followed the stream up to the base of the dam. On the way we saw *Polystichum aculeatum* and *Asplenium scolopendrium*, indicating a calcareous nature to the underlying rocks. After meeting up with the rest of the party at the dam we all trekked up one of the very small streams entering the reservoir. Following a path, of sorts, we exited the valley to marvel at three or four specimens of *Blechnum spicant* clinging to life on the bare, disturbed soil on the banking. After a pleasant stroll through the wood we again split up, with the adventurers scrambling up to a limestone cliff supporting *Polystichum aculeatum, Asplenium trichomanes* subsp. *quadrivalens* and *Cystopteris fragilis* (44/077918). Back to the cars and off to the pub, The Wheatsheaf Inn, Carperby; the honeymoon hotel of the real-life James Herriot, Alf White.

On the way to the final site we stopped off at 34/986898 to marvel at the luxuriant little lawns of *Selaginella selaginoides*. You do get funny looks from 'normal' folks when there are a group of apparently quite rational people kneeling down in a circle with their bottoms in the air taking photographs of **grass!**

But, on to Askrigg and the last two waterfalls of the weekend. The first was in Mill Gill (34/938914) with a high cascade of water creating superb conditions for *Pteridium aquilinum, Dryopteris filix-mas, D. dilatata, Athyrium filix-femina, Polypodium vulgare, Polystichum aculeatum, Asplenium scolopendrium* and *Cystopteris fragilis*. If it wasn't so lime rich, it would be perfect for filmy ferns. On the way out of Mill Gill there was an old lime kiln supporting a drought-shrivelled colony of *Asplenium trichomanes* subsp. *quadrivalens*.

A short walk across fields to Whitfield Gill (34/934922) revealed the same mix of species as in Mill Gill, but with the addition of a few plants of *Oreopteris limbosperma* (34/934922). An old record for *Asplenium adiantum-nigrum* at the top of the force was not pursued. The enthusiasm had faded with the increased speed of the rain, and the descent to the top of the fall was looking treacherous. Back to the cars and a final record of *A. ruta-muraria* on the church wall. All together it had been a hard and hopefully enjoyable weekend. Only time will tell when the Leeds group will host its next national meeting, hopefully in Teesdale in 2002. See you then.

LECTURE MEETINGS AND DAY VISITS 1999

SPRING INDOOR MEETING, UNIVERSITY OF READING – 20 March

The arrival of many members before 10.00 a.m. was the prelude to a very full and enjoyable day, being a combination of 'business' (the AGM) and 'pleasure' (the rest!). However (to be fair), the AGM also had much discussion of interest, always difficult to convey in 'formal' minutes.

The programme for the day was quite varied, commencing with Clive Jermy's talk entitled 'The Geography and Ecology of Ferns of Britain and Ireland'. As I had hoped (and had originally suggested to Clive), the talk was a successor to his excellent article 'Fern Recording and Monitoring' in the 1998 *Pteridologist*. The talk focused on the various activities that need to occur in order to produce the second edition of the Fern Atlas (*Atlas of Ferns of the British Isles*, BSBI & BPS, 1978). The objectives are:–

- To revise the Fern Atlas,
- To produce text on distribution, ecology and conservation,
- To provide illustrations of selected species.

Information technology techniques would be used to support the various initiatives, including additional web pages on the BPS site, the implementation of a fern distribution database and, perhaps in the longer term, the production of an interactive CD ROM. Clive described the relationship of this project with initiatives being undertaken by other bodies, then went on to provide a draft synopsis of the Atlas. As an example of regional overview content, a distribution map of *Dryopteris aemula* in Cornwall, produced by Rose Murphy, was shown.

Posing the question "How can I help?", Clive described several areas requiring particular attention:–

- The checking of old records (the 'open' circles on the maps!),
- Searching for problem taxa, such as *Cystopteris alpina*,
- Being on the lookout for hybrids of *Equisetum, Dryopteris, Polystichum* and *Polypodium*,
- Seeking out the species of high conservation interest, e.g. *Pilularia globulifera* and *Lycopodiella inundata*,
- The detailed mapping of the *Dryopteris affinis* aggregate.

Clive then completed his talk with a selection of fine slides. The initial set showed the morphological differences between the three major *D. affinis* taxa now recognised. Particularly impressive were the close-ups of scales and sori. Seeing soral details at different stages of their seasonal development was something of a revelation. If funding could be found, the reproduction of such photographs in handbook format could be an invaluable field aid. Clive finished with a selection of slides of several fern allies, all in one way or another having conservation interest.

Martin Rickard had 'volunteered' to run the next event, a fern quiz, which turned out to be quite a bit of fun! The quiz involved participants (most of us!) observing slides, and answering the associated questions (normally the identification of the specimen shown). Members of less than three years standing were deemed to be 'beginners', and thus permitted a less comprehensive response (i.e. the generic name of the fern would suffice). To give a flavour of the questions:–

- A shot of a well grown specimen of *Woodwardia fimbriata* was recognised by no-one, few having been able to grow it to a respectable size!
- A South African species of *Schizaea* nestling in grassy vegetation was recognised by quite a few people (much to the surprise of the quiz-master!),
- The shots of British species such as *Phegopteris connectilis* and *Gymnocarpium dryopteris* were good likenesses, and gave little difficulty to most,
- Neither of the two shots of *Culcita macrocarpa* in N. Spain showed its obvious characteristics, and proved problematical for most people,
- An example of *Homo sapiens* in the form of Alison Paul, complete with epizooic grasshopper, proved rather easy!

And it was Alison Paul who emerged as the overall winner. However, the fine prize of a sizeable *Dicksonia antarctica* donated by Martin Rickard was declined by Alison (not being flat compatible), and was presented to the runner up, Clive Jermy. The 'beginners' prize of vouchers for reduced BA air fares went to Stefan Czeladzinski.

photo: A.C. Wardlaw

Question-master and winners of fern quiz:
Stefan Czeladzinski, Alison Paul, Martin Rickard, Clive Jermy.

So far, so good, but we were over-running the programme time. Fortunately, proceedings righted themselves fairly easily, because only two of us had brought material for the 'Members' Slides' session! Andrew Leonard showed ferny shots of his recent visit to Sri Lanka. Graham Ackers showed scenery and fern slides taken during a visit in the autumn of 1998 to Mauritius.

Apart from committee members, who were meeting, most people had the opportunity over the lunch period to look at the many 'goodies' on display. There were fern sales, managed by Patrick Acock – a selection of *Selaginella* species brought along by Stefan

Czeladzinski being of particular interest. Merchandise sales were provided by the Craddocks and booksales by the Munyards. One of these days I will resist the book buying temptation, but such restraint did not happen at this meeting! There was also a fascinating display of fern memorabilia, including porcelain vases and plates, *two* copies of Bolton's *Filices Britannicae*, a New Zealand fern album, a set of fern cigarette cards, the collection of E.J. Lowe's medals, and pressed ferns from the University Herbarium. Also displayed was a large collection of British polypodiums in pots, ex University of London (Egham) and now owned by Reading University.

Although AGMs can be difficult to enthuse about(!), I found this one to be very interesting, stimulating some good informed comment and debate from the floor. As a change from previous AGMs, Officers appointed to perform specific tasks gave their own reports, which provided a rather better insight into the various strands of the Society's activities. Martin Rickard ran the proceedings with his usual panache, and concluded by presenting the Stansfield Medal to Matt Busby for his outstanding services to the Society. The full proceedings are minuted elsewhere.

photo: A.C. Wardlaw

Martin Rickard *(right)* presenting Matt Busby with Stansfield Medal.

One consequence of a lively AGM is that it is likely to run over its allocated time – in this case, it doubled from one hour to two! Ironically, our Secretary Jennifer Ide had advised me to provide the one hour slot, and thus suffered 'at her own hand' in having to rush her presentation! This final session, 'Treasures of New Zealand', was a series of splendid slides taken during Jennifer's trip there early in 1998. After showing an epiphytic *Pyrrosia*, Jennifer went on to show many slides of *Blechnum* species, of which she had made a special study. These were present in various forest habitats, including high altitude *Nothofagus* forest and the wetter tropical forests in the North.

Such forests contain New Zealand's most famous tree, the Kauri (*Agathis australis*), with its bizarre growth habit and appearance. By my count (from *New Zealand Ferns* by Brownsey and Smith-Dodsworth) there are 18 *Blechnum* species, and we were shown slides of at least half of these. Some are hairy, some vining, some swamp loving, and many have new fronds of a beautiful red colour. Pictures of many other species were shown, belonging to the genera *Asplenium*, *Arthropteris*, *Grammitis*, *Hymenophyllum*, *Hypolepis*, *Leptopteris*, *Loxsoma*, *Lycopodium*, *Pellaea*, *Phymatodes*, *Rumohra*, *Trichomanes*, and the fascinating primitive epiphyte, *Tmesipteris*. We were also shown some of the *Cyathea* tree-ferns – *C. dealbata* (the silver fern), *C. medullaris* (which reaches above the tree canopy), and *C. smithii* (which grows below the tree canopy). *Dicksonia squarrosa* seems to have its old and new fronds mixed together. To finish, we were shown a bizarre slide of *Dicksonia fibrosa* trunks being used for fencing, with fronds emerging from some of the fence posts!

I would like to thank the many members who contributed to the meeting. The Plant Sciences building of the University of Reading proved an ideal venue with excellent facilities. Particular thanks are due to Paul Ripley for arranging this venue, and resident academic Dr Stephen Jury for being such a splendid host, attending to our every need! My impression was that everyone had enjoyed the day, and so the format might become a suitable one to replicate at future Spring/AGM meetings.

Graham Ackers

ROYAL BOTANIC GARDENS, KEW, RICHMOND, SURREY – 29 May

This year, the topic of this traditional annual meeting at Kew was furniture and memorials! Jennifer Ide is researching furniture made by cabinet makers Anton Seuffert and his son William. Anton, a Bohemian, had immigrated to New Zealand in the mid-1800s. On arrival, he quickly established himself as a cabinet maker of exceptional talent and over a number of years was commissioned to make several *bonheurs-du-jour* as presentation gifts to people such as Archbishop Selwyn, Queen Victoria and Joseph Hooker, all of whom had made significant contributions to New Zealand's development in the early years of colonisation. The decoration of their work with scenes and the flora and fauna of New Zealand, all inlaid in NZ veneers, frequently features ferns, and in a few pieces they dominate the decoration. All are portrayed with such exquisite accuracy that, in most cases, they can be identified. At least 16 ferns feature on a desk made by William and presented to Major-General Baden-Powell for his achievements at the siege of Mafeking in the Anglo-Boer War, and approximately 36 on a dining table made for an international exhibition in 1886, probably by Anton. Jennifer finished her presentation by showing slides of other items made by the Seufferts. Particularly well known to pteridophiles are the inlaid covers for albums of pressed New Zealand ferns.

After lunch, we were privileged to see the dining table before going to St Anne's church on Kew Green, where the vicar, the Reverend Peter McCrory, greeted us. He gave us a lively introduction to the unique history of the church and to its architecture, before Jennifer drew our attention to the memorial to William Jackson Hooker, the first Director of the Royal Botanic Gardens and a regular worshipper at the church. The marble memorial is decorated with plaques of Wedgwood jasperware featuring sprays of fern fronds surrounding a medallion of the head of Hooker; a most fitting memorial as he had established a world reputation as a pteridologist, and had written the first world conspectus of ferns, *Synopsis Filicum*. Jennifer described the commissioning and problems encountered in the manufacture of the memorial, illustrating her account with

quotations from letters by William Hooker's son, Joseph, who commissioned the memorial (and, incidentally, followed his father as Director of the Gardens), Reginald Palgrave, Joseph's cousin and sculptor of the fern plaques, and Geoffrey Wedgwood. Members were then left to identify the ferns on the memorial for themselves and to explore the church.

I would like to thank the Director of the Royal Botanic Gardens for permission to see the dining table, the Reverend Peter McCrory for the interest and time he gave to our visit to his church, and Peter Edwards who kindly made the domestic arrangements for this meeting.

Jennifer Ide

SAVILLE GARDENS, WINDSOR GREAT PARK, BERKSHIRE – 3 July

Saville Gardens are amongst Britain's finest, and a BPS visit was long overdue. On a cloudy but dry morning, Lyn Randall, Superintendent of the Gardens, and our guide, gave us a short history and account of the gardens. Contained within its 40 acres there are around 16,000 different plant species and cultivars (needless to say, not all of these are ferns!). The Gardens own nine NCCPG National Collections, one being a general collection of ferns. The soil is light and sandy, which proves quite a challenge when the rainfall in the area only averages 23 inches per year. One consequence of this is that some large trees are being lost gradually through a cumulative drought effect. Like many others in the south-east, Saville Gardens also lost many trees in the 1987 storm, but seized the opportunity to plant a new and more varied tree area.

In general, the fern interest in the Gardens lies in four areas – waterside habitats, the peat beds, the Queen Elizabeth Temperate House and the woodland area.

The fine stands of *Osmunda regalis* make impressive waterside features, displaying (as Lyn pointed out) wonderful croziers in spring, fine fertile and vegetative foliage in summer, and autumn colour. Royal fern cultivars are well represented too. *Onoclea sensibilis* has behaved in its usual rampant way in the wet conditions, but looked good all the same!

The peat beds are planted with choice shade loving plants such as arisaemas, trilliums, primulas and ferns. Of note were a large collection of polypodiums, and a small group of thriving *Asplenium dareoides*, not an easy fern, even under more closeted conditions!

The Queen Elizabeth Temperate House was built in 1995 to include some innovative features. Architecturally, it is decidedly 'modern', but possesses aesthetic qualities given by its large single sloping roof, elevated walkway, its sloping terrain and adventurous layout. The environmental management regime is to allow as much fresh air in as possible, with heating only coming on when the temperature drops to 4°C. As a result, the atmosphere is 'bouncy', favouring ferns of more open habitats (rather than rainforest species). However, more humid 'pockets' are present. There is a good collection of several *Woodwardia* species, some Dennstaedtiaceae, *Dryopteris*, *Polystichum*, *Dicksonia*, etc. There was a small group of *Dryopteris* x *sjoegrenii* in one corner, a very rare plant indeed, being the hybrid between *D. dilatata* and *D. intermedia* subsp. *azorica* and found only on Pico, Azores.

The woodland area is a maze of small paths amongst trees and many *Rhododendron* taxa, and discovering ferns there can be a little hit or miss. Fortunately, Lyn knew the

locations of the ferns most likely to be of interest to our group and guided us around very skilfully. We saw a number of *Dryopteris* species (many provided by Christopher Fraser-Jenkins), many of which are uncommon in cultivation. However, they are obviously hardy here, the main cultivation challenge being to provide sufficient water. Particularly striking was *Dryopteris formosana* from Japan/Taiwan, with its markedly triangular frond shape and very long basal basiscopic pinnae. *Dryopteris* from NE United States were well represented, as were European examples (some stands of *Dryopteris affinis* agg. provided the usual excuse for heated debate!).

At the end of a long and enjoyable morning, with the sun increasingly shining through, we dispersed. Thanks are due to Lyn Randall who did a splendid job as our guide, being very patient whilst many of our group deliberated at great lengths over the merits of the plants! The afternoon was free for people to continue their explorations of these fine gardens.

Following the meeting, Lyn kindly provided me with a list of the ferns grown in the Gardens. This runs to some 360 taxa (species, hybrids and varieties). Any member so wishing is welcome to contact me for a copy.

Graham Ackers

MIDLANDS FERN SHOW, UNIVERSITY OF WARWICK, COVENTRY – 17 July

Class 1 – One Pot Fern (any kind or variety)
1st Mr L. Kirkham, 2nd Mr P.J. Acock, 3rd Mr P.J. Acock (3 entries)
Class 2 – Three Pot Ferns (any kind or variety)
1st Mr L. Kirkham (1 entry)
Class 3 – One Pot *Equisetum* (any kind or variety)
1st Mr P.J. Acock, 2nd Mr P.J. Acock, 3rd Mr P.J. Acock (6 entries)
Class 4 – One Pot Aquatic Fern (*Azolla, Salvinia* or *Marsilea* only)
1st Mr P.J. Acock (1 entry)

Non-competitive Classes:
Class 5 – A Culture of Prothalli in a container (no entries)
Class 6 – Ferny Miscellany (books, ceramics, art etc.) (no entries)

The J.W. Dyce Trophy, awarded to the exhibitor accumulating the most points overall, was won by Mr P.J. Acock.

I was extremely disappointed with the attendance for this year's meeting. It really does raise the question: *What do members want from Society meetings?* The meeting provided an opportunity for members to meet at a central and very pleasant venue, ample free car parking, free refreshments, a fern show, a visit to a very interesting fern garden (mine!), a plant sales table, a guest speaker providing an illustrated talk and glorious weather. I am at a loss to know what more we can do.

I am obliged to Lawrence Kirkham for the following report:

Some sixteen members attended the fourth Midlands Fern Show. A poor turnout in comparison to previous shows when it was twice this figure. It was quite surprising considering the treats that were on offer to the fern enthusiast.

We enjoyed a superb display of *Cheilanthes* species, including *C. pruinata* which I thought, though bigger, had a striking similarity to *Asplenium trichomanes* 'Incisum'!

A bring-and-buy plant sale, organised by me, raised some £20 towards offsetting the cost of the show, and itself generated much conversation and a chance for new members to take home some 'goodies'.

During the morning, we visited Matt Busby's garden. The garden had been undergoing changes this year with tree removal and heavy pruning of climbers to let in more light. Matt's National Collection of *Osmunda* was looking particularly resplendent and his cultivars of *Asplenium scolopendrium* were very pleasing to the eye. One or two borders are in the process of renewal so the garden had a fresh new air about it. Special mention must be made about a fern which caught my eye: *Polystichum setiferum* 'Mrs Goffey', sporting very finely divided fronds. Surely it must rank as one of the top ten soft shield fern cultivars.

While the fern classes were being judged, the meeting was entertained and educated by an illustrated talk entitled 'The Best of the West' presented by Sue and Harry Olsen of Washington State, USA.

Sue explained that Washington State is a high rainfall area with very little frost and, apart from on the higher ground, very little snowfall. So many ferns were illustrated and discussed and even a British cultivar identified! Topics of conversation on various slides ranged from problems with late spring frosts, to seeing *Polypodium glycyrrhiza* as an epiphyte on species of maple. Of particular interest were shared problems; it seems that American slugs devour *Arachniodes simplicior* with as great a relish as do ours! Several specific areas were mentioned, including Henry's Plant Farm where ferns are produced in large quantities for the American market. In the Olympic Peninsular, where many of the 100 ferns native to the State of Washington luxuriate in the temperate rainforest, selaginellas grow on trees, with *Polypodium glycyrrhiza* nestling amongst them. Many gardens were featured including the Belle Botanic Garden, a definite stop-off for any future visit by the BPS; Sue and Harry have a long treasured desire to host a Society visit.

Our thanks to Sue and Harry for interrupting their UK holiday to provide us with such an interesting talk.

A.R. Busby (& L. Kirkham)

AUTUMN INDOOR MEETING, NATURAL HISTORY MUSEUM – 23 October

We have become used to interesting meetings at The Natural History Museum but nothing could have prepared us for the treat in store for us on this occasion. The team pulled out all the stops for an extremely full programme. It was difficult to move people from one session to the next because they just wanted to linger and find out more.

We were greeted at the entrance to the Museum by Josephine Camus who had our badges ready. From here we went up to the Cryptogamic Herbarium where we were given our programme for the day as well as an introductory talk. We were split into two groups and then worked our way through four 70-75 minute sessions.

Fred Rumsey started our group off on problems of identification. First Fred put the British ferns in context with the fern flora of Europe and then of the World. Although we have less than half the ferns of the Continent, both genera and families are well represented. A range of *Dryopteris* fronds were on display to show some of the problems of identification and classification on gross morphological grounds. However, nowadays another tier of tools is available to help sort out relationships and to confirm hypotheses; we were to learn more about these in the afternoon.

Alison Paul introduced us to curation. She showed us a huge bound fern volume, one of over three hundred volumes from Sir Hans Sloane's herbarium which laid the foundations for the Museum's botanical collections. Many other collections from notable botanists and pteridologists such as Sir Joseph Banks, John Smith and Carl Christensen have been purchased or acquired over the years bringing the collection to its present size of five and a half to six million specimens, of which about a quarter of a million are ferns. Alison told us how the sheets had been preserved from pests in the past using chemicals such as mercuric chloride and naphthalene; today's freezing treatment is more user-friendly! She also explained how the fern herbarium is arranged and accounted for the bias in the collections; historically many plants came from the colonies whereas nowadays acquisitions tend to reflect the floras being worked on. She then talked about modern curatorial methods, including databasing of specimens and how some of the historic sheets are being scanned to provide a virtual herbarium of digital images, some of which can be seen on the Museum's Web site.

After lunch, Fred Rumsey and Sally Henderson showed us some of the techniques available to look both at closely related ferns and those that are morphologically similar. With the aid of a microscope with a video camera attached we were able at low magnification to separate the polypods by counting annulus rings and basal cells. Sally then used the classic Irene Manton squash technique to prepare a slide to show the chromosomes which we were able to see on the monitor. We also looked at the spores of *Asplenium adiantum-nigrum* and hybrids to see the difference between the aborted and fertile spores. We then went upstairs to the East Tower where Sally showed us computer images of 'snippets' of DNA and discussed how she uses this technique to confirm relationships between plants and also to show whether ferns from different geographical locations are exactly the same, or whether over the course of time they have diverged slightly.

Josephine Camus and Malcolm Beasley took us into the Botany Library Special Collections Room where Malcolm explained that the library contained not only forty thousand monographs but also collections of art work. Downstairs they had arranged a collection of modern fern books, theses and journals. Upstairs were laid out an outstanding collection of fern drawings and antiquarian books, each with a caption by Josephine telling the significance of that work. The display started with a copy of *De Causis Plantarum* written in the first century BC by Theophrastus, the father of botany and a disciple of Aristotle, in which he praised the medicinal properties of ferns. We progressed through time and many beautifully illustrated books until we reached 'our own' Charles Druery's *Choice British Ferns*. As well as the books, Malcolm had displayed many illustrations of ferns including several from Cook's historic journey of discovery to Australia. Back downstairs we surfed the net for fern subjects and looked through the computer catalogue of the Museum's works.

We would like to thank all the organisers of the day who had worked so hard in preparing this varied programme down to the finest detail. The only regret is that more members did not avail themselves of this superb day.

Pat Acock

REGIONAL MEETINGS 1999

LEEDS & DISTRICT

Forge Valley, North York Moors – 26 June
(Leaders: Chris Wilson & Ken Trewren)

Barry Wright

We were fortunate to coincide this meeting with one of Ken Trewren's home visits. Chris Wilson, a local farmer, is a keen local botanist and familiar with many good fern sites in the area. We started our studies on Chris's farm (Thorn Park Farm) where he took us to see one of the few local stands of *Dryopteris carthusiana* (44/988886). We also saw *D. dilatata, D. filix-mas, Athyrium filix-femina* and *Equisetum palustre*.

photo: B. Wright

Thorn Park Farm

Neil Timm, (Pauline Jones – *hidden*), Chris Wilson, Ian Oglesby, Eily Ruston, Betsy Kohler, Pam and Les Lyon, Pat Cole, Ken Trewren and Ron Cole looking at *Dryopteris carthusiana*.

From here we drove a short distance to the western side of the valley at 44/981874, where we walked through shoulder high stands of *Equisetum telmateia* with the usual mixture of *Dryopteris dilatata, D. filix-mas* and *Athyrium filix-femina*. A short distance from the track and part way up the side of the valley we found *Polystichum setiferum, P. aculeatum* and the hybrid *P.* x *bicknellii*. Also found were some plants of *Asplenium scolopendrium* along with two 'sorts' of *Dryopteris affinis*, assessed by Ken Trewren to be morphotypes *insolens* and *borreri*.

On our way to the next site we called in for lunch at the Everley Arms. Fully refreshed, we went off to look at another *Polystichum* x *bicknellii* site at Northfield Wood (44/981909). On this occasion, one of the parents was not close by. There were plenty of *Polystichum aculeatum* plants, but the *P. setiferum* was some way further up this steep-sided, wooded gill. Also in the wood were more *Asplenium scolopendrium, Athyrium filix-femina, Dryopteris dilatata, D. filix-mas* and *Blechnum spicant*. Another *Dryopteris affinis* caught Ken's eye; he convinced us it was morphotype *robusta*. Back at the spot where we had parked (44/988917) there was morphotype *affinis*.

En route to our final site Ken stopped in a car park at the top of a hill hoping to see some *Polypodium* x *mantoniae* at 44/962945. Unfortunately, we were too early in the year to use the sorus characteristics needed to be certain of seeing the hybrid. There were good colonies of *Polypodium vulgare*, more *Blechnum spicant*, *Pteridium aquilinum* and *Oreopteris limbosperma*. Our last stop was at the only recorded location for *Osmunda regalis* in the North York Moors (44/969964). There were several large plants of the royal fern in a very boggy bit of woodland which also supported *Equisetum arvense* and *E. fluviatile*. Ever wishful, Ken wondered if there were some hybrids in the population – *Equisetum* x *litorale*. On this occasion we were not wholly convinced. Perhaps another time! We were more generous when it came to the *Pteridium aquilinum*, *Dryopteris dilatata* and *Blechnum spicant*.

The day was rounded off with a trip to the tea room of the wood's owner, John Simpson. He is a farmer/hotelier who encourages and promotes his farm walks and is well aware of the special fern he takes care of. Thanks to John, Chris and Ken for a very full and interesting day.

Roche Abbey, Maltby, South Yorkshire – 10 July — Paul Ruston
(Leader: Paul Ruston)

Roche Abbey was a monastery of the Cistercian order founded in 1147, and it functioned as such until its dissolution in 1538. The ruins, not withstanding the modification by a certain Mr C. Brown during the latter part of the 18th century, are said to rank in importance with the finest early Gothic architecture in the north of England. The Abbey sits snugly at the confluence of two narrow valleys, and is overlooked by outcrops and escarpments of magnesian limestone that support a vegetation of yew, ash and ivy. We were to look at Kings Wood and Grange Wood, both SSSIs under the care of English Nature. The woodlands and Abbey form part of the estate of Lord and Lady Scarborough by whom permission to enter had been granted.

A very warm and sunny morning greeted the nine members who congregated at the Old Gate House (43/542899). Some excellent and interesting ferns were duly exchanged between members, half the proceeds contributing to Society funds. On the walls of the Old Gate House we noticed *Asplenium ruta-muraria* and one poor *A. scolopendrium*. The ornithologists amongst us where delighted to see a buzzard soaring majestically above the woodlands; a good omen maybe? We entered Kings Wood and followed an old hollow track, passing by an ancient and rather large lime tree. Shortly we came to an outcrop of rock supporting a gnarled and contorted old yew tree and several specimens of *Polystichum* x *bicknellii* (43/544895); their identification was latterly confirmed by Ken Trewren. We traversed the wood, encountering a few plants of *Athyrium filix-femina*, *Dryopteris dilatata*, *D. filix-mas* and a very curious looking *D. affinis* (43/546888). *Pteridium aquilinum* was also found, in small quantity. Guelder rose (*Viburnum opulus*) was also noticed in this area, along with thick carpets of dog's mercury (*Mercurialis perennis*). On the way back to the Gate House *Polystichum aculeatum* was seen growing upon a steep, shady east-facing slope (43/541893). Three of us went to look for equisetums at the top pond marked on the map, which unfortunately turned out to be a dried up nettle bed. The bottom pond was extremely boggy, with thickets of willows and water forget-me-not (*Myosotis scorpioides*) along the water's edge, but not a single *Equisetum*. But all was not lost, *Equisetum arvense* was duly found by the path close to where we had previously entered the wood.

After a very delicious and well earned pub lunch we re-assembled at the Old Gate House to tackle Grange Wood; the east-facing escarpment which had looked on a previous visit to be promisingly ferny, was now, due to the rank vegetation – of a stinging nature – impossible to reach. We pressed on up a steep rocky incline, stopping to examine some very variable looking *Polystichum aculeatum* (43/542897), or were they *P.* x *bicknellii?* After a short scramble through very wicked and tortuously clinging brambles, we came across a magnificent specimen of what we thought must be an extremely robust type of *Dryopteris affinis* (43/542975) with very foliose fronds approximately 1.5m in length and a thick, scaly basal stipe. This was later confirmed by Ken Trewren to be *Dryopteris* x *complexa*. Further searching through very tenacious ground cover was, fern-wise, unrewarding, but an area of old hazel coppice with ground flora of primulas and lily-of-the-valley (*Convallaria majalis*) did, as pointed out by Barry Wright, show that we were indeed privileged to have been about in what is probably very ancient woodland. The day concluded with the team retiring battle scarred and weary, but hopefully contented.

Bilton Gorge, Knaresborough, North Yorkshire – 17 July **Barry Wright**
(Leader: Jack Bouckley)

This extra visit to Bilton was slotted in by Jack through his contacts with the conservation volunteers looking after this ancient woodland site. We were co-opted to help with their mapping project for the whole wood. We did parts of these woods in 1996. This year we went into unexplored territory. We covered the northern and southern sides of the river east of the car park at 44/330584. In the morning we did the recent plantation woodland on the northern side and found a moderately rich fern flora of *Pteridium aquilinum, Dryopteris filix-mas, D. dilatata, Athyrium filix-femina, Equisetum telmateia* and *Polystichum aculeatum*. There were some small rock-faces with *Asplenium ruta-muraria* and *A. scolopendrium* and also some *Dryopteris affinis* morphotype *borreri* or possibly *insolens*.

After a picnic by the bridge we set off along the southern side. Heading eastwards we soon left the footpath and followed the river (44/333576), making excursions further afield to look for anything other than the common stuff we had seen in the morning. We saw the standard *Pteridium aquilinum, Dryopteris filix-mas, D. dilatata* and *Athyrium filix-femina*. But we also saw odd plants of *Blechnum spicant, Asplenium scolopendrium, Polypodium vulgare* and *Polystichum aculeatum*. There was much excitement at finding a larger colony of *Equisetum telmateia* than we had seen in the morning. This was superbly lit by the afternoon sun shining in through the trees. What a time to realise that my spare film was in fact an exposed roll that I had forgotten to replace with a fresh one!! It was positively primeval in there. The other vegetation pointed distinctly to the fact that this was a more ancient woodland site than the northern bank. Ken showed us a convincing *Dryopteris affinis* morphotype *borreri* and tried hard to convince us of an undocumented morphotype. Nice plant, but...

After a long scramble back, paying homage to the small colonies of *Equisetum hyemale*, we found Jack relaxing in the shade. Thanks Jack!

Askham Bog, York – 14 August **Barry Wright**
(Leader: Jack Bouckley)

Our annual 'easy one' was a trip to the Yorkshire Wildlife Trust's reserve at Askham Bog. One of the few raised valley mires left in the area, it is almost totally covered in birch woodland and separates two halves of a golf course.

After a quick plant sale we started in Middle Wood (44/573482) where we found *Dryopteris dilatata* and *D. carthusiana* along with *Athyrium filix-femina* and *Dryopteris filix-mas*. There were a few small plants of *Osmunda regalis* and our first small specimens of *Thelypteris palustris*. The less disturbed Far Wood was to reveal much better specimens of both, with a magnificent royal fern at 44/569481.

photo: B. Wright

Askham Bog

Paul Ruston, Julia Wilkins, Bob Adams (*back*), Betsy Kohler, Ron Cole and Jack Bouckley looking at *Thelypteris palustris*.

There was also a small colony of *Azolla filiculoides* in one of the many ditches crossing the site. On the way back we engaged in conversation with some men having their 'good walk spoiled' by trying to hit a poor defenceless ball into a hole no bigger than a decent-sized tea mug. Speaking of tea, next stop the pub for lunch after a quick look at Near Wood and sampling some of the apples growing on the railway embankment.

After lunch we went to the dead centre of York (sorry, poor joke). The York cemetery (44/609508) is now home to a growing collection of ferns and we were shown the progress so far. Jack, Julia Wilkins and James Merryweather are the driving force behind this rewarding venture to bring a bit of life to the place (sorry, another bad joke). There were some instances where headstones were decorated with ferns, although the most popular motif was ivy. In addition to the planted ferns the naturalised specimens were mainly *Dryopteris filix-mas*. Some of these had an unusual upright habit; it was not clear if this was a varietal character or the result of having to grow in tall grass.

There is a recollection that one of the famous Backhouse family is buried somewhere in this cemetery. Jack and James will hopefully pursue this and we may be able to dedicate the fernery to their memory.

SOUTH-EAST

Danesbury Park and Sherrardspark Wood, Welwyn, Herts. – 12 June

Patrick Acock

The SE Group was well out of its normal boundaries when it met at Danesbury Park (52/233168), an old Georgian Manor House just north of Welwyn Village, to look at the remains of a once great Victorian fernery. Pat Watt, a local botanist, her husband and her friend Stella were our hosts for the day. We walked up a trackway towards the house past an unimproved meadow. The verge had a magnificent collection of flowers in it including the woolly thistle *Cirsium eriophorum*.

We turned off before the house to look at the ruins of the old fernery and to hear the tale of its sad demise. A father had started it in the late 1860s and his son (only recently deceased) had kept it going until his ill health had led to the decline of the garden. In its hey-day it had some of the original clones of the choicest fern varieties of the day and many of these had been kept alive until quite recently.

The fernery was completely artificial and on a grand scale. It consisted of a large hole in the ground shaded by trees and protected by a deer fence and hedge. Into this a large rockery was constructed of pulhamite stone, cast *in situ* by the firm of Pulhams. Through three generations they have specialised in these large garden constructions, the most famous of which is probably the rockery at Wisley. The last Pulham involved with the firm was almost certainly the Pulham who assisted Jimmy Dyce rebuild the Society after the Second World War. The site relied entirely on pumped water and tending and so fell into a rapid decline when the last owner became too old to tend it. Sadly, we could find no a trace of a fern, not even bracken.

From the fernery we were taken to a wild meadow in front of the house to look for *Ophioglossum vulgatum*; most of the group found their own clumps.

After dinner at The Red Lion public house on the old A1 (52/224141), we visited Sherrardspark Wood across the road. Here we were treated to some common ferns growing well, including *Blechnum spicant* which is not very common in Hertfordshire, and *Athyrium filix-femina* in the deepest, dampest part of the wood.

Sellindge Woods and Folkestone Warren, Kent – 24 July

Patrick Acock

We had been asked by Melanie Wrigley of the White Cliffs Countryside Project if we could look at some of these East Kent woods. Thus, on a very hot summer's day six SE members met a colleague of Melanie, Nick Johannson and his French exchange student, Baptiste, by Gibbin's Brook (61/115385) in Sellindge Woods. Unfortunately we were a great deal further east than usual which probably accounted for the low attendance.

Gibbin's Brook turned out to be a fascinating area of bog, even though it was very much drier than usual for the time of year. Besides a much drier oak strip there were two other tree encroachment areas: on one side there was goat willow and on the other alder. As we entered from the lane, crossing the stream half way along the reserve, we were rewarded with no less than three horsetails: *Equisetum arvense, E. palustre* and *E. fluviatile*. In the oak wood, besides *Pteridium aquilinum*, we saw *Dryopteris dilatata* and *D. carthusiana* but surprisingly no *D. filix-mas*. Downstream towards the end of the wood *Athyrium filix-femina* was found, its size increasing with the increasing dampness. We were amazed to see how well the *Dryopteris carthusiana* grew, even out

in the cleared areas of bogland. Across the road was a much wetter area giving way to an area of wet meadows with another fascinating collection of plants. Gradually *Equisetum fluviatile* and *E. palustre* gave way to other plants such as hemp agrimony and in the drier area a large patch of *Carex hirta*.

After inadvertently testing the waters again we did manage to cross to the other side, only to find that we had to fight our way through very high bracken.

We thanked Nick who could not join us for the afternoon session and after a pub lunch made our way to the aptly named Capel-le-Ferne.

Only a short descent down The Whitecliffs (61/253382) we espied the purpose of our mission, *Asplenium scolopendrium*. Out came the tape measures. It's strange how the eye is deceived by form. On innumerable occasions we thought we had a record breaker only to find it was six inches off the pace. Jill Clare had one to equal the record only to lose it when we sort to confirm it. After half an hour Peter Clare called me over to look at a real beauty. We knew without measuring it that it was a winner, but by how far? The tape measure proved it to be 3ft 7⅞ins, a full six inches bigger than last year's. If you have not seen the hart's tongues at The Warren you just have not seen hart's tongues.

Besides *Asplenium scolopendrum* we saw *Polystichum setiferum*, *Dryopteris filix-mas* and some very handsome *D. affinis* subsp. *borreri*. And yes, I must admit that I did drink three mugs of hot tea when we got back to the cliff top cafe with the temperature close to 80°F!

Groombridge, Kent/East Sussex – 5 September **Paul Ripley**

Eleven members met on a pleasantly warm day at Groombridge, near Tunbridge Wells. We were pleased to welcome John and Sue Bocock, joining us for the first time.

We first drove the short distance to Balls Green Station on the now defunct Tunbridge Wells to Forest Row line (51/488365) and walked west along the track, now a path. A circular walk took us past *Blechnum spicant*, *Polypodium vulgare* (less common down here than *P. interjectum*), *Athyrium filix-femina*, *Dryopteris filix-mas* and *D. dilatata*. On a bridge over the infant River Medway we saw *Asplenium trichomanes* and *A. scolopendrium*. Our target was the *Cystopteris fragilis* which grows under the old station platform. This was pleasingly abundant although gradually declining due to the overgrowth of ivy.

After lunch at The Crown, Groombridge (recommended), we walked the short distance to Groombridge Place. Originally a mediaeval moated manor, it now offers entertainment for the whole family in extensive grounds. We were lucky to escape the attentions of assorted barons and archers, ostensibly fighting on behalf of Richard the Lionheart (although it is rumoured that he is dead...).

Although we were disappointed that our original venue, Ausferns, had had to be postponed, we were not disappointed by this visit. On old walls, and planted occasionally elsewhere, we found *Asplenium scolopendrium*, and in the woods we saw *Blechnum spicant*, *Athyrium filix-femina*, *Dryopteris filix-mas* and *D. dilatata*. However, we also found *D. carthusiana* commonly, and two fine adjacent specimens of *D. affinis*, subspp. *borreri* and *affinis*. Our appetite for tree-ferns was fully satisfied in the 'Tree Fern Valley'. Many fine specimens of *Dicksonia antarctica* had been attractively planted here. Some were 20 feet tall, and we were intrigued to see *Rumohra*

adiantiformis growing epiphytically on some of the trunks. Irrigation is supplied via small plastic tubes to the crowns, but presumably these plants are hardy in this somewhat sheltered wooded valley. *A Dicksonia* nursery under and outside polythene tunnels was seen in a (private) walled area and some ferns were on sale in the shop.

Further down the attractively landscaped, stream-fed valley, *Polystichum* species, *Matteuccia* and *Athyrium otophorum* had been planted. Groombridge Place is somewhere to be revisited, although preferably with children, and well-armed! Our day finished under threat of a thunderstorm with the obligatory tea and excellent ice-cream.

End of Season Meeting, Farningham, Kent – 16 October **Patrick Acock**

Around ten members met up at 'The Lion', Farningham (51/546671) to examine the walls of the millrace opposite, courtesy of the new owner, Mr Nigel Snelling-Colyer. We had gone to look at an alien fern as well as the millrace, a rarity in itself. The alien was *Pteris cretica* which was noted in the Kent Flora (Philp 1982). The plant was in the middle of the millrace on the far side. Of perhaps greater significance were probably the three reasonable colonies of *Adiantum capillus-veneris*. Howard Matthews had his 1998 *BSBI News* to check that I had not delivered another alien (i.e. *A. raddianum*) but I had checked the plant last year. I also knew that in Victorian times there had been an extensive colony of *A. capillus-veneris* in neighbouring Crockenhill (Philp 1982), so thought that the plant could have come from there. We were also shown around the old gardens, and saw another *Pteris cretica,* as well as *Dryopteris filix-mas, Asplenium ruta-muraria* and *A. scolopendrium*.

A short distance away in Farningham Woods (51/545679), Howard really came into his own, adding *Athyrium filix-femina, Dryopteris carthusiana* and *D. affinis* subspp. *affinis* and *borreri* to the *Polystichum setiferum, Dryopteris filix-mas* and *D. dilatata* that I had taken them to see.

We then journeyed to our secretary, Jennifer Ide's garden in Eltham. Jennifer has recently revamped the garden to allow her mother greater access and to make it more manageable. There are more areas available for ferns and these were growing more strongly in their new conditions. There were many water ferns, horsetails, exotic hardies and a nice *Dicksonia antarctica* amongst the collection of British ferns and varieties. Two friends of Jennifer who had accompanied her during the day helped with tea which consisted of magnificent sandwiches and a whole range of home-made cakes; it really is amazing that more members do not support these gatherings – the tea alone is worth coming for! After tea Howard showed some fern slides from his summer exploits, and Paul and I showed slides from the GEP meeting in Bavaria. Then Peter Clare continued to astound us. At the millrace he had taught us all about fish, in the woods we had learnt about flint knapping and now we had a fantastic tour of the skies.

We would like to thank Jennifer and her two friends for being such good hosts.

References

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EAST ANGLIA

Indoor Meeting, Little Thurlow, Suffolk – 31 January — Bryan Smith

My interest in ferns, which ultimately led to my becoming a BPS member, was largely due to a trip to New Zealand in October 1996 and the incredible sight of so many magnificent tree-ferns. So it was with great anticipation that I looked forward to Jennifer Ide's talk and slide-show. Members and friends of the East Anglian Regional Group (15 in all), who crowded into Mary Hilton's 17th-century home at the end of January, were not disappointed. Jennifer guided us on a mouth-watering tour using just a small selection of slides taken from more than 40 reels shot during the New Zealand spring of September 1997. It was only the breaking down of her camera which had prevented her from taking more.

Jennifer took us systematically through field and woodland ferns and, such is her expertise, the botanical names flowed like butter off a hot knife. I scribbled frantically trying to keep up, but failed miserably. Perhaps an indication of New Zealand's fern diversity is that she found 35 different species out of the 40 she specifically wanted to see, in just one half day's walk in a wood. We saw slides of a delightful *Blechnum* with young red fronds filling banks, the multi-dividing *Gleichenia microphylla*, a lake full of red *Azolla filiculoides* looking like a giant red clay patch, and *Blechnum filiforme* which grows along the ground only to change its form as it then creeps up trees. There were aspleniums ranging from *A. bulbiferum* to the epiphytic *A. polyodon* as well as *Sticherus cunninghamii, Polystichum vestitum, Pellaea rotundifolia, Doodia media, Nephrolepis cordifolia* and the filmy fern *Trichomanes reniforme*, to name but a few. One of Jennifer's favourites was the very attractive *Leptopteris superba* (Prince of Wales feathers), and we were even treated to shots of the rare and protected *Loxsoma cunninghamii*. Jennifer also included images of other representatives of New Zealand's flora such as the giant Kauri trees, and non-indigenous plants such as lupins, foxgloves and viper's bugloss. Indeed 60% of the New Zealand flora is apparently non-native.

And then we came on to the tree-ferns. Magnificent *Cyathea medullaris, C. smithii, Dicksonia squarrosa, D. fibrosa* and *Cyathea dealbata* (the silver tree-fern which is New Zealand's national emblem) could not fail to impress, especially when shot from beneath with huge fronds forming a canopy against a clear sky. Even fences made from tree-fern trunks along roadsides could be seen sprouting fronds, and the intricate cream and black trunk structure was put to attractive effect in carved vases.

We broke for tea and home-made cakes generously provided by Mary, and at the same time Peter Richardson gave us a demonstration of how he raises ferns from spores in culture pots containing an agar mix. His binocular microscope gave us a rare chance to see, in close-up, the developing stages of ferns.

Jennifer then took us into the second part of her slide-show – Seuffert fern-veneered furniture. Jennifer's interest in this began when she saw a writing-desk given to Lord Baden-Powell by New Zealand Aucklanders to commemorate his defence of Mafeking. The desk is intricately veneered with exact reproductions of New Zealand ferns (as well as scenes of Maori life). Dedicated research both here and in New Zealand has made Jennifer an expert on the furniture produced by father and son, Anton and William Seuffert, the family having moved to New Zealand from Austria in the early 1860s. Jennifer showed us slides of tables, boxes, sideboards, picture frames and the covers of fern albums, all bearing beautifully detailed ferns made from inlaid wood veneers. Many of the ferns are readily recognisable, the most common being *Blechnum discolor*

and *Pteris macilenta*. Such has been Jennifer's doggedness that she has even been able to identify some of the scenes in the designs, including the engravings from which they were taken.

There was well deserved thanks for Jennifer, especially as her transparencies were both botanically interesting and lovely to look at. Even Mary's cat enjoyed the show, having sat transfixed about a foot in front of the screen throughout.

Ickworth Park and Gardens near Bury St Edmunds, and Willow Cottage, Cowlinge, Suffolk – 6 June **Sylvia Norton**

The forecast was not particularly good but it did not deter 21 members and friends of the East Anglian Group from gathering in the car park at Ickworth, which is administered by the National Trust.

We were met at the Orangery by the Head Gardener, Jan Michalak, who came to Ickworth over 20 years ago and has worked hard to restore the original design, clearing and replanting where necessary. Jan gave us a brief history of the estate (which is mentioned in the Domesday survey), including the original Tudor Hall, Ickworth Lodge, where the Hervey family lived in the 18th century, and the present building, begun in 1795, occupied in 1829 but not completed until 1841. The grandiose design was the idea of the 4th Earl of Bristol and Jan gave us many amusing stories about him and his building plans. The 18th-century park with many fine trees owes some of its design to 'Capability' Brown but the formal garden was laid out in the Italianate style by a nephew of Lord Bristol in the 1830s. A central path leads from the Rotunda to a raised terrace walk with views over the gardens and park bordered by a hedge of clipped mixed box, which, with the many differences of leaf shape, texture, colour and growth rate, was reminiscent of a tapestry. (Ickworth holds one of the NCCPG National Collections of *Buxus* (box) species and cultivars.)

Side paths led to the Gold and Silver Gardens and to the Stumpery, a re-creation of a Victorian style of fern garden. The Ickworth Stumpery is a lovely shaded area with grass paths winding around the huge upturned tree-stumps (dug up in a clearing process) which have been arranged on raised banks with all manner of shade-loving plants growing round and in between the twisted roots. Here were *Gymnocarpium dryopteris, Polystichum proliferum, Pellaea falcata* and the tiny *Blechnum penna-marina* among many others, looking very much at home with small-leaved ivies and dwarf box. We were fortunate in being taken to the now empty conservatory at the end of the East Wing below which, and viewable through covering grilles, the basement area walls were covered in *Pteris cretica* and *Asplenium scolopendrium*, escapes from the conservatory in its former glory and surviving happily in what must be very sheltered conditions.

Members had brought with them a large selection of less common ferns and these were presented to Jan Michalak to be added to Ickworth's Garden and Stumpery.

After lunch we walked down the hill in the Park and alongside a canal where *Equisetum palustre* was growing thickly. As we approached Lady Katherine's Wood the ground rose sharply and in front of us was the Fairy Lake, on the far side of which, in a rare pocket of acid soil, grew *Rhododendron ponticum*, with marestail, yellow waterlily and gipsywort at the lake edge. An additional surprise came when we entered the wood where ferns were growing in great numbers under mixed trees. *Dryopteris affinis* was very common and among them a few single plants of *D. affinis affinis* were found and several good specimens of *D. affinis borreri*. Other *Dryopteris* found as we spread out

photo: Brian Jackson

Carrying ferns to Ickworth – East Anglian members and friends:

Tim Pyner, Steve Munyard, Hugo Stevenson, Gill & Bryan Smith, Howard Matthews, Barnaby Stevenson, Sylvia Norton, Rosemary Stevenson, Iris Jeffery, Marie Winder, Alf Hoare, Geoffrey Winder, Barrie Stevenson, Karen Munyard, Mary Hilton, Linda & Mick Craddock.

were *D. carthusiana, D. filix-mas* and *D. dilatata*. An excellent specimen of *Dryopteris* x *deweveri* was found by a particularly sharp-eyed member of the group. *D. filix-mas* growing almost beside *Athyrium filix-femina* made it easy for novices to compare the two. *Polystichum setiferum* was also plentiful. Carpeting the woodland floor was that beautiful ferny moss *Thuidium tamariskifolium* mixed with dog's mercury and *Pteridium aquilinum*, proving the acidity of this small area.

After our excellent visit we drove through a torrential thunderstorm to the Stevenson's cottage in Cowlinge where Rosemary's delicious tea was much appreciated while waiting for the storm to finish before viewing the garden. When Barrie and Rosemary first moved here 28 years ago the garden was a long, narrow, uninteresting site parallel with the road and strafed by winds from every direction. Now, sheltered by hedges enclosing a large number of trees and shrubs, the flat land is sculpted into interesting mounds and hollows with a figure-of-eight path snaking its way from the house to the open, sun-drenched area at the far end and back again. The garden has been filled with a stunning array of plants which give colour, texture and form for year-round interest. Roses, clematis and honeysuckle climb up through the trees making vertical bands of colour to complement the horizontal ground cover. Among all these are the ferns, some making individual statements while others are massed in the shady hollows and on the sides of the banks adding their feathery texture to the deciduous leaf mass. Barrie has a particular love of cultivars and there are many fascinating forms of *Athyrium, Dryopteris, Polypodium* and *Asplenium scolopendrium*. There are also osmundas and blechnums, all quietly asserting themselves in their own season and time. Behind the house is a special damp area where ferns that love these conditions (including a specimen of *Dicksonia antarctica*) grow happily, and rows of pots full of sporelings continue the life cycle. At the far end, past the sitting area and raised beds crammed with sempervivums, is the nursery where sporelings are grown on and potted up. It is difficult to imagine the amount of work necessary to create this Eden but there is no doubt that this is an enchanting garden, and our visit proved a most satisfactory ending to the day so well planned by Barrie.

Stour Wood, near Harwich, and Glen Chantry Garden and Nursery, near Witham, Essex – 18 July

Geoffrey Winder

Stour Wood (62/189309) is an RSPB reserve on the southern banks of the Stour estuary about four miles upstream from the ferry port of Harwich. Andy Schofield, one of the wardens, met 12 of us in the car park and accompanied us round the reserve which is mixed deciduous woodland with a preponderance of sweet chestnut, but also oaks, hazel, birch, etc. It is managed in a system of rides which increase the ingress of light and consequently a more varied and luxuriant flora has developed along them. Some areas of the wood have been pollarded. Not only do these rides and pollarded areas provide a diversity of habitat for plant and bird life, but they are ideal for various woodland insects – the white admiral butterfly being particularly common this year.

Ferns were relatively plentiful for this part of eastern England. *Pteridium aquilinum* occurred here and there but was never particularly dominant. *Dryopteris affinis* was probably the most common fern, co-existing in two forms in almost equal numbers, sometimes only a few inches apart. One form was smooth and golden looking, the other darker green and more luxuriant. At first it was thought that the latter was morph. *affinis* but, after much deliberation, it was decided that both were forms of morph. *borreri*. *D. dilatata* and *D. carthusiana* were present throughout the wood, though the latter was much less frequent; very few *D. filix-mas* were found and only a single group of three or four *Athyrium filix-femina* which were growing in a moist area near the centre of the reserve.

Interestingly, Andy Schofield showed us three or four colonies of what was thought to be *Polypodium interjectum*, growing on the sides of the old ditch which runs alongside a track close to the reserve's western boundary. As one colony looked slightly different, perhaps more lush than the others, one of our group took a few fronds home for more detailed examination and concluded that this more luxuriant looking colony was *P.* x *mantoniae*, the others *P. vulgare*. Not far away were a couple of *Polystichum setiferum*, the only ones we saw, and then, in a more open part of the reserve, growing in a small runnel and in the shade of a small silver birch, we came across several thriving *Blechnum spicant*.

After a picnic lunch we drove to Glen Chantry (52/831131), a superb garden with nursery attached, a mile or so east of Witham, just across the River Blackwater. The 3½ acre garden slopes down from the house; near the house are some stone troughs containing alpines and below them a large limestone rock garden largely planted with alpines and containing a fair selection of polypodies. This rock garden merges into mixed beds and borders planted with interesting and often unusual trees, shrubs and perennials. Down this slope is a series of small ponds joined by a stream. Among the plants in this area is an interesting collection of ferns planted, appropriately, between or against the rocks or in the damper earth near the water. Among them were *Adiantum pedatum* var. *subpumilum*, *A. venustum*, *Athyrium niponicum* 'Pictum', *A. otophorum*, *Asplenium trichomanes*, *Blechnum spicant*, *B. penna-marina*, *Dryopteris dilatata*, *Matteuccia struthiopteris*, *Polystichum munitum* and *P. setiferum*, to name but a few.

During the afternoon most of us visited the nursery – a fine collection of plants but only a few ferns. After the garden had closed to the public several of us returned with Wol Staines, who runs Glen Chantry with his wife Sue, to identify or confirm the identity of some of the ferns.

Cavenham Heath, Suffolk and Peter Richardson's Garden, Witchford, Cambridgeshire – 5 September

Tim Pyner

A group of 13 met at Cavenham Heath, an English Nature site (52/757727), on a hot sunny morning. The Heath is one of the largest remaining undamaged areas of Breckland. Although not noted for its ferns, we had a pleasant walk around the wooded part of the reserve, accompanied by the Warden, Malcolm Wright. Broad buckler fern was the most common and was frequent on stumps and in damp hollows and ditches. The fronds were smaller than usual but rain three weeks earlier had ensured plenty of fresh leaves. Deer browse the fronds and most of the older ones were bitten off at the apex. Male fern was occasional and stunted plants of bracken grew in dry, rabbit-grazed grassland. The only other pteridophyte seen was field horsetail which was frequent along ditch banks.

After a picnic lunch on the Heath, the afternoon was spent at member Peter Richardson's small but unique garden at Witchford, near Ely. Here Peter has amassed a fascinating collection of New Zealand plants. A substantial part of the collection is of pteridophytes, and most of Peter's ferns have been obtained from his own spore collections. Peter moved house last year and all his plants moved too, but despite this most of them were in excellent condition.

Blechnum is one of Peter's favourite groups and he has a range of species including several of the *B. minus* complex and some also from Australia. Other New Zealanders include fine plants of *Asplenium obtusatum, Davallia tasmanii, Polystichum silvaticum* and *P. richardii. Adiantum aethiopicum, A. cunninghamii, Pteridium esculentum* and *Asplenium lyallii* were also doing well. I was particularly taken with *Hypolepis rufobarbata* which arrived as a contaminant in a spore tray. It will make a good garden plant. Peter also has a large selection of *Dicksonia* and *Cyathea*, all quite small at present but very healthy, and he has managed to grow some of the normally very difficult Gleicheniaceae. I noticed good examples of *Gleichenia dicarpa* and *Dicranopteris linearis*. A superb specimen of *Lycopodium volubile*, a climbing clubmoss, was very attractive.

Many of the shrubs Peter has collected are little known in Britain. Of particular interest were members of the genera *Pseudopanax, Weinmannia, Quintinia* and *Pittosporum*.

A superb tea, provided by Peter, completed a most interesting visit.

End of Season Meeting, Barrow, Suffolk – 31 October

Barrie Stevenson

At the time of writing, we are looking forward to our Autumn Indoor Meeting at the home of Marie and Geoffrey Winder. After viewing their garden and their collection of hardy and semi-hardy ferns, we shall enjoy a slide-show of ferns of France, Madeira and New Zealand. On display will be photographs of ferns in several English gardens, including Sissinghurst Castle, Kent, and Saville Gardens, Windsor. There will also be displays of fern-decorated pottery and porcelain and a group of old microscopes.

Following a trawl of the fern bring-and-buy stall, we shall enjoy what has become, by tradition, a sumptuous spread of refreshments, thus bringing to a close a very pleasing season.

NORTH-WEST

Standish Cote, North Walney NNR and Piel Island, Cumbria – 12 June

Jack Garstang

Standish Cote (34/235782). This farm is the highest habitation on the Furness peninsula, at 220m (715ft) above sea level. The stone retaining wall and grass verge of the approach road, cut into the eastern slope of Bank House Moor, are home to large numbers of *Dryopteris dilatata, D. filix-mas, Athyrium filix-femina, Blechnum spicant, Polypodium interjectum* and the one fern in particular that we wanted to find, the glandular and hay-scented *Dryopteris aemula*. One of only four recorded sites for the latter in Cumbria, this is the most accessible, and with 21 members turning up on a bright sunny morning it made a good start to our first field meeting of the year. Finally, a large stand of *Equisetum telmateia* on nearby Ireleth Hill allowed us to examine a fern ally that is uncommon in this area.

North Walney NNR (34/170705) comprises 350 acres of sand-dunes, heath, grassland, saltmarsh, scrub and shingle at the north end of the largest of a group of six islands off the Furness peninsula. It has been moulded by tide and waves from glacial debris and wind blown sand over the last 10,000 years and more recently by man. Covering the bottom of disused gravel pits were acres of *Equisetum fluviatile* while, on the dunes and grassland, *E. palustre* and *E. arvense* were both very common. A large patch of *Ophioglossum vulgatum* also created a great deal of interest. *Oreopteris limbosperma, Dryopteris filix-mas, D. dilatata, Athyrium filix-femina* and huge *Blechnum spicant* were found on the marshy ground to the east of the reserve where the substrate of boulder clay holds the surface water, making ideal conditions for acres of the dominant species, *Dryopteris carthusiana*. Growing along the lines of old drainage ditches were large numbers of *Osmunda regalis*, showing their vigour by regenerating on the banks of nearby gravel pits. There was some disappointment on discovering that a large colony of *Equisetum variegatum* found on our previous visit in 1996 was no longer there.

photo: M. Garstang

North-West members observe *Ophioglossum* on Walney Island.

Piel Island (34/208639 & 34/233637). The mile and a half walk to Piel across the sands from Snab Point, Walney, is possible during a five hour slot two and a half hours either side of low water. Piel was given to the monks of Furness Abbey by King Stephen in the 12th century and they built the 'Castle' (a fortified warehouse) with defensive ditches plus inner and outer bailey walls. These ditches and the ruins of the boulder and cement walls have long been home to all the island's ferns except bracken. *Asplenium marinum* was first recorded in 1855 by pteridologist F. Clowes of Windermere and entered in *The Ferns of the English Lake Country*, a guidebook

published by W.J. Linton of Brantwood in 1865. *Asplenium adiantum-nigrum*, *A. ruta-muraria* and *A. trichomanes* were found on the walls, and *Dryopteris dilatata* in the defence ditches. *Pteridium aquilinum* covered several acres of ground, its height and extent reflecting exactly the wind shadow of the north-west shore dyke. Refreshments in the 18th-century Ship Inn preceded the pleasant walk back over the sands in the evening sunshine to 'beat the tide'.

Harrogate and Bilton Gorge, North Yorkshire – 3 July

Peter Hindle (a.m.) **& Jack Garstang** (p.m.)

Jack Bouckley had kindly invited the group to visit his garden, the principal attraction of which is his national collection of *Asplenium scolopendrium*, growing mainly in the open but also in his shade-house and greenhouse. Many of the 26 members present were glad that there was no test at the end as the collection holds 58 varieties of this versatile fern, one or two as yet unnamed. One of these had been found by the North West Group on Hutton Roof Crags (*BPS Bulletin* Vol. 4. no. 6) and was provisionally named as *A. scolopendrium* 'Muricato-marginatum' (minute form). It was nice to see it thriving and hopefully it will soon be added to the national list.

Space was restricted but this was a great advantage to us, as, moving slowly along the paths, we were able to spend time admiring the large assembly of exquisite athyriums and, a high point for many of us, the Killarney fern (*Trichomanes speciosum*). Fifteen varieties of *Equisetum* were available for study, including *E.* x *dycei*, *E. sylvaticum*, *E. variegatum* and two types of Dutch rush (*E. hyemale*).

Ruth Bouckley and helpers kept us well supplied with refreshments during this very rewarding morning. Packing away our notebooks we moved off to the Greyhound Inn to strengthen ourselves for the afternoon visit.

Bilton Gorge (44/314576), a spectacular chasm nearly six miles in length, forms the core of the Nidd Gorge Project area, several square miles of countryside between the A59 Skipton Road, the B6165 Ripley Road and the A59 Knaresborough Road. The section selected for our outing was from the Ripley Road car park downstream towards Knaresborough and was led by Keith Wilkinson, chairman of the Bilton Gorge Conservation Society. The society has already received Millennium funding for a complete botanical survey and our remit was to help confirm previous findings and look for new ferns. We found just one, *Polystichum aculeatum*, previously unrecorded, and most but not all of those on record, i.e. *Asplenium ruta-muraria*, *A. scolopendrium*, *Athyrium filix-femina*, *Dryopteris affinis*, *D. dilatata*, *D. filix-mas*, *Blechnum spicant*, *Equisetum arvense*, *E. sylvaticum*, *E. hyemale*, *E. telmateia* and *Pteridium aquilinum*.

The gorge, formed on a Carboniferous Sandstone/Permian Limestone fault, has an acid/alkaline eco-system. On small screes of shattered carboniferous sandstone, hand-sized fragments, deftly split in two by Keith, revealed fossilised tracks of the bristle-worm, *Polychaetis*.

Emerging from the gorge into the warm afternoon sun, a short walk along a disused railway siding brought us back to our parked cars. Keith Wilkinson was warmly thanked for sharing both his knowledge and his time on this splendid outing.

Swindale, Cumbria – 31 July (meeting point 35/528157) **Robert Sykes**

The head of Swindale presents a typical Lake District scene: in the valley bottom drumlins and glacial relict features, grass slopes rising steeply, then screes and small

outcrops with a few trees and then, again, wide gullies and crags to the skyline. We ventured there with a party of 16 on a blazing hot July day. The party diminished progressively as we climbed, and the less fit or less enthusiastic cut across to the beck bottom to enjoy a paddle or a sunbathe. Five of us worked our way right up and out at the top. *Pteridium aquilinum* grows throughout. There is *Athyrium filix-femina*, and *Cryptogramma crispa* decorates the walls and ditches at the lowest level. In the middle scree and outcrop level we saw *Polypodium vulgare, Asplenium trichomanes, Oreopteris limbosperma, Dryopteris affinis, D. dilatata* and *Phegopteris connectilis*. Jack Garstang claimed a *D. expansa*. There was some *Gymnocarpium dryopteris* growing in the shelter of some large boulders. The oddity on this site is at the foot of the upper crags and outcrops: there must be an unexpected alkaline flush, because there is *Asplenium viride* and *Cystopteris fragilis*.

A BPS party visited Swindale in 1983. What we did not see in 1999 was *Dryopteris oreades* (said to have been notably plentiful and spectacular on the earlier occasion), *Dryopteris affinis* x *oreades* spotted by Clive Jermy, *Asplenium ruta-muraria* and *Polystichum aculeatum* (that basic flush again). Our excuse must be that time was limited by promises to meet the valley party, but it is a place that would be worth revisiting and exploring in some detail. We did see this time one or two small plants of *Blechnum spicant*.

The rest of the day included a swim, a refusal in all the circumstances to hunt for *Hymenophyllum wilsonii*, two bunches of keys lost, a missing person, some invaluable independent witness statements and a manhandled Fiesta. All in all an eventful day.

Dentdale, Cumbria – 21 August **Alan Meakin**

The Dentdale Fault (a branch of the Craven Fault) crosses lower Dentdale; to the west the underlying rock is acidic Silurian while further east it is limestone with some shales. This makes for an interesting distribution and variety of fern habitats.

A party of 25 BPS members gathered below Rottenbutts Wood (34/673888), probably the only semi-natural woodland in the Dale. A wet, steep and wooded ascent on a loose, stony, acidic substrate took us to extensive stands of *Gymnocarpium dryopteris* and *Phegopteris connectilis* growing in close association and covering an unusually large area of the upper wood and decorating the fringes of the badger set. Also noted were *Oreopteris limbosperma, Dryopteris filix-mas* and *Athyrium filix-femina. Dryopteris affinis* specimens were closely examined and 'discussed'. *D. dilatata* was plentiful, and *D. carthusiana* was identified in the boggy base of the wood.

A short car journey took us to the head of Barbondale (34/683864) for a stroll to Combe Scar (acidic), a glaciated corrie with scree and light woodland. *Cryptogramma crispa* was profuse with large sheets of small, yellow-fronded *Gymnocarpium dryopteris* climbing high onto loose scree. *Hymenophyllum wilsonii*, previously recorded here, was not rediscovered but an intrepid ascent into the crags by Jack Garstang produced *Asplenium adiantum-nigrum* which had not been previously mentioned from this site. *Blechnum spicant* was common. There were many *Dryopteris affinis* plants – once more a conversation topic.

A descent into Dent Town and the limestone was followed by a walk through the village to examine walls with *Asplenium trichomanes, A. scolopendrium, A. ruta-muraria* and *Polypodium* sp. In Flintergill some exotic garden ferns were examined and below the waterfalls luxuriant *Polystichum aculeatum* plants were admired.

At the end of a very warm and rewarding expedition, the party returned to Rocklea for refreshments. After sustenance a small group went back to Flintergill to climb higher to see the *Asplenium viride*. Most of us just supped another cup of tea!

Castle Folds, Orton, Cumbria – 11 September **Mike Porter**

On a warm but very windy morning with rain forecast for later in the day 12 members of the North West group set off from the foot of Knott Lane (35/639079) just east of Orton in Westmorland to climb to the limestone pavements which lie behind Orton Scar. The route was at first totally devoid of ferns but did give us excellent views of a stone circle situated between the road and the Coast to Coast footpath. After a steady climb lasting about three-quarters of an hour we reached the first small limestone pavement and immediately found a good collection of ferns, including some limestone specialities. Here were *Asplenium viride, A. scolopendrium, A. trichomanes, A ruta-muraria, Cystopteris fragilis, Gymnocarpium robertianum, Polystichum aculeatum, Dryopteris filix-mas* and *Athyrium filix-femina*. We checked the scent of lightly crushed leaves of the *Gymnocarpium robertianum* to see if they smelt of apples, as detailed in the field guide. Reactions varied from "Just smells green to me" to "Ah yes, New Zealand Braeburn". Overall we were unconvinced.

In comparison to Hutton Roof, visited last year during the BPS Coniston weekend, the pavements above Orton are higher, colder and less vegetated. They appear to contain more *Asplenium viride*, though *A. trichomanes* is also present in quantity, and more *Polystichum aculeatum*. On the other hand, at Hutton Roof there are equally good quantities of *Gymnocarpium robertianum* and *Dryopteris submontana* whereas at Orton the *Gymnocarpium* seemed to be much the commoner. Indeed it was not until we climbed to the brow of the hill and over into the 'lunar landscape' where magnificent sloping pavements converge below the ancient settlement of Castle Folds that we found much *Dryopteris submontana*. Here we sat down for lunch followed by careful examination of a beast new to many of us, the hairy snail.

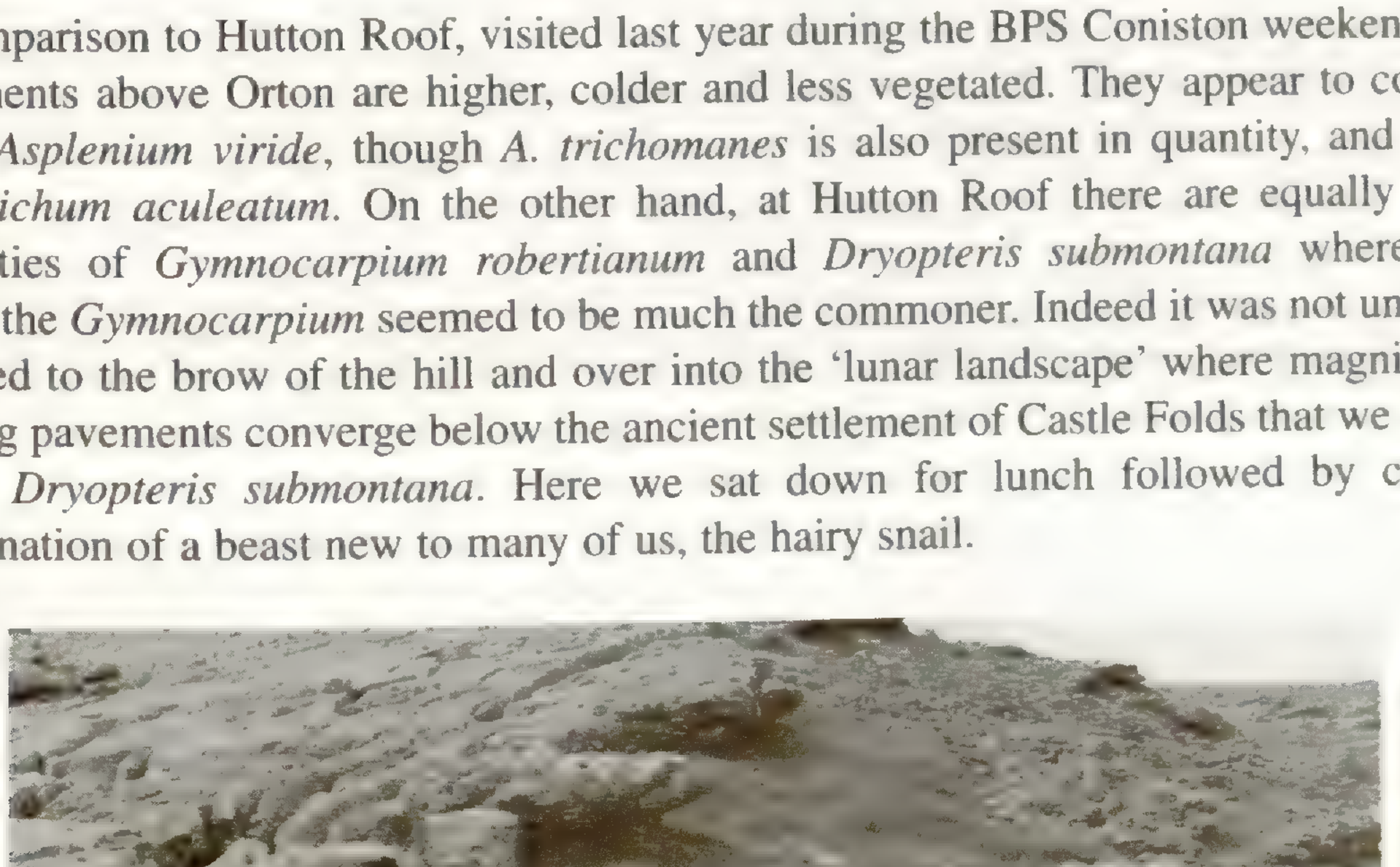

photo: B. Colville

North-West members near Castle Folds.

In the afternoon we explored the pavements below Castle Folds, noting the slightly sticky feeling imparted by the glands on the leaves of *Dryopteris submontana*. We then made our way over the settlement itself and, following some nerve-racking wall climbing, set off back to the cars. By now dark clouds and murk were building up, obscuring the view south to the Howgill Fells and, as we approached the road, the long-forecast rain arrived to hurry us on our way.

AGM, Holehird, Windermere, Cumbria – 2 October **Jack Garstang**

A longer day meeting from 10.30 a.m. to 5 p.m. was the new format for our sixth AGM, held in the Garden Room at Holehird. Tea, coffee and biscuits were served to welcome 35 members on their arrival. Our first illustrated lecture, entitled 'Butterflies and Bracken' was by Rick Stewart from the Institute of Terrestrial Ecology, Merlewood, and showed the vital role that bracken now plays in arresting the decline of fritillary butterflies, mainly the high brown, pearl-bordered and dark green fritillaries.

There then followed a mid-session break for lunch, a garden walk, plant sales and the opportunity to examine the 1999 meets photographic display, fossils from Arbigland fossil beds and the Orton limestone, and a frond of *Asplenium marinum* from Rathlin Island measuring 57cm, surely the longest found this century.

The group business was quickly dealt with, many suggestions for our programme for the year 2000 being put forward. Our second illustrated lecture, given by Dr James Merryweather, was entitled 'The Unravelling of Male Ferns'. This was a comprehensive examination of a number of *Dryopteris* species and was followed by study of collected material and lengthy discussion.

Our lady members again produced their finest confectionery for an excellent tea. The winners of the potted fern competition were (1) A *Dryopteris* – Jack Garstang with *D. remota* and (2) An indoor fern – Eric Bell with *Adiantum micropinnulum*. The crossword competition was won by Trevor Piearce who now has the task of compiling a Millennium word game.

CORNWALL **Rose Murphy**

Due to illness, it has not been possible to organise properly structured field meetings this year. However, a few of the group continued to meet informally and, as a result, some interesting additions were made to the list of Cornish ferns. *Thelypteris palustris* was found by Ian Benallick on Tregonetha Downs in East Cornwall. This new site is, at present, the only locality in the county for this decreasing fern; it has long gone from Clodgy Moor in West Cornwall.

Mary and Tony Atkinson made a visit to the north side of Sharp Tor on Bodmin Moor in order to confirm a report of a new colony of *Huperzia selago*. Thirty-three plants, some with gemmae, were found at 20/261737, interestingly just one week after the appearance of the *Pteridologist* with an article on the fir clubmoss which stated that it could be found in moderate numbers in West Cornwall only on the Lizard!

Chris Page has added a further *Equisetum* hybrid record, this time *E.* x *willmotii*, seen on the National Nature Reserve, Goss Moor, at 10/939595.

It is hoped that meetings will commence again next year and with this aim in mind it is planned to hold an indoor meeting in December at the Cornwall Wildlife Trust at Allet, near Truro.

HORTICULTURAL SHOWS

BBC GARDENERS' WORLD LIVE! – 16-20 June — A.R. Busby

Once again I prepared a stand of hardy ferns in the Specialist Societies section of this show. This year's theme was 'Gardens of the World'. Unfortunately, I did not give much thought to how I could support the theme, but on the eve of the show I realised that a stand of foreign hardy ferns with the legend 'A World of Ferns in your Garden' was the obvious answer. This I did but with no artwork prepared nor an attention-attracting globe, my efforts proved very poor.

My enthusiasm for putting on the stand was also dampened by the fact that for the second year running no staging had been provided. This meant that I had to wait some two and a half hours while the organisers' office tried to make contact with the firm responsible for building the stands. All this in spite of me having sent in a plan of my requirements during March. The result was that my temper was sorely tried and the ferns risked being scorched by the sun on one of the hottest days of the year. This show has become one of the biggest and one of the most expensive gardening shows. So many companies have a finger in the pie that it's difficult to know where the Royal Horticultural Society's responsibilities start and finish.

Eventually, I was able to stage some twenty-two ferns, mostly foreign hardy ferns but with four or five British varieties to represent Great Britain and Ireland.

It's always difficult to judge how successful these ventures are or by what criteria to judge them. I suppose that an influx of new members would be the main sign of success; time will tell. We did distribute about fifty application forms to those who expressed an interest in joining.

During the Thursday evening I attended a press conference for all exhibitors. Here it was announced that major changes are afoot for next year's show. The show has been housed in Halls 5 and 9, with the nurseries accommodated in a long narrow marquee on the other side of the driveway. This makes the show rather dispersed and very tiring to see. Also, because of the NEC's arrangements, little lead up time is allowed for the firms wishing to build the show gardens.

Next year, the show will be housed in the new Halls 17, 18, 19 and 20 and the main glass Atrium, with half a million pounds being spent on converting a large car park into landscaped gardens. This promises to make the show a far more unified event. I only hope that they bear in mind the need for convenient access for the build up and breakdown of the show and for ensuring that the specialist societies' stands are ready on the day.

My sincere thanks to Sue Pierce-Seary, Jeff Whysall, Alan Ogden, Ray and Brenda Smith and to NCCPG members Rosie Peddle and Moira Bastow for taking care of the stand and so allowing me time off when most needed!

SOUTHPORT FLOWER SHOW – 19-21 August — A.R. Busby

Thursday morning dawned grey and wet, Southport once again trying to live up to its reputation for lousy weather. However, as the day progressed the weather improved and remained fine for the rest of the Show.

The number of exhibitors was down and even the regular contenders had reduced their number of entries but I was pleased to see that the quality of the exhibits was very good. It was difficult to separate first from second in most classes. Presentation was also of a high standard; exhibitors really do seem to have learned that lesson well. All the exhibits were of show bench standard but for me the best fern in the show was G. Abbott's superlative *Adiantum raddianum* 'Kensington Gem'.

The judge was A.R. Busby. The prize winners are listed below.

Class 6 Individual Championship: Four hardy, two greenhouse and two foreign hardy ferns: 1st Mr & Mrs B. Russ (1 entry)
Class 7 Three Hardy British Ferns (dissimilar): (no entries)
Class 8 Three Hardy Foreign Ferns: 1st L. Kirkham (1 entry)
Class 9 Three *Polypodium* (distinct varieties): 1st L. Kirkham (1 entry)
Class 10 Three *Polystichum* (distinct varieties): (no entries)
Class 11 Three *Athyrium*: 1st L. Kirkham (1 entry)
Class 12 Three *Asplenium* (excluding *A. scolopendrium*): 1st L. Kirkham, 2nd Mr & Mrs B. Russ (2 entries)
Class 13 One British Fern (any kind or variety): 1st L. Kirkham, 2nd Mrs Fairclough (2 entries)
Class 14 One Greenhouse Fern: 1st G. Abbott, 2nd Mrs E.A. Gibbs, 3rd L. Kirkham (3 entries)
Class 15 Three *Asplenium scolopendrium* (3 distinct varieties): 1st L. Kirkham, 2nd Mr & Mrs B. Russ (2 entries)

My thanks to Lawrence Kirkham for assisting with the manning of the Society stand and to Ray Smith for sending a goodly supply of cut fronds.

We are always short of help on the stand so if any members have just a few hours to spare I would be very pleased with any offers of help.

THE AMERICAN FERN SOCIETY

The AFS invites all readers of this *Bulletin* to join the American Fern Society. Regular members receive the *Fiddlehead Forum* five times a year. This newsletter is published for the benefit of those who are interested in growing ferns, hunting for them, and expanding their knowledge of ferns. Journal members also receive the scientific quarterly *American Fern Journal*. Membership costs $11 and $22 per annum respectively for members residing outside USA, Canada or Mexico, including postage for airmail-assisted delivery. For particulars please write to Dr David B. Lellinger, 326 West St. NW, Vienna, VA 22180-4151, USA. Prospective members residing in Great Britain should write to Mr M.S. Porter, 5 West Avenue, Wigton, Cumbria CA7 9LG.

AFS SUBSCRIPTION PAYMENTS: Our societies have an exchange arrangement whereby members of the BPS can pay their AFS subscription through the BPS Membership Secretary and *vice versa*. Contact your Membership Secretary for details.

SECRETARIAL NOTES

Please note that the BPS Honorary General Secretary will be unavailable from 1st February until 7th March 2000 inclusive.
Any urgent matters should be addressed to the President, Mr Martin Rickard, Pear Tree Cottage, Kyre, Tenbury Wells, Worcs. WR15 8RN

ANNUAL GENERAL MEETING 2000 – The 97th AGM will take place on Saturday 25th March 2000 at Chelsea Physic Garden at 2.00 p.m.

COMMITTEE VACANCIES – In accordance with paragraph 3, section 3 of the Society's Constitution, two vacancies will occur due to the retirement of the two longest serving Committee members. Nominations are invited from Society members to fill these vacancies at the Annual General Meeting in 2000. The names of the nominees, proposers and seconders, together with a letter from the nominee indicating his/her willingness to serve, should reach the General Secretary by February 2000.

SUBSCRIPTIONS 2000 – Members are reminded that subscriptions for 2000 are due on the 1st January 2000 and should be paid to the Membership Secretary, Mr M.S. Porter, 5 West Avenue, Wigton, Cumbria CA7 9LG. Cheques should be made payable to 'The British Pteridological Society'. Current rates are given inside the front cover. Payment can be made by **Credit Card** – see renewal form. **Standing Order** forms are printed on the reverse of renewal forms and are also available from the Membership Secretary. Please note that Standing Orders may now be paid on 1st January or 1st February. In the latter case, membership is still deemed to be from 1st January to 31st December.

PUBLICATIONS BY AIRMAIL – Our journals can be sent by airmail to overseas members, provided that they advise the Membership Secretary and pay an additional subscription to cover airmail postage. See inside front cover for rates.

ROYAL HORTICULTURAL SOCIETY – Our Society is affiliated to the RHS. enabling a limited number of members to enjoy certain privileges in connection with RHS Shows, competitions and services.

GREENFIELD FUND – This fund, set up as a memorial to one of our Society's great fern growers, Percy Greenfield, is used to finance approved research projects, helping with the cost of necessary equipment, books and travel expenses. Percy Greenfield's interest leaned very much towards the non-scientific side of our activities and it is felt that he would want this taken into consideration when decisions are made. Workers eligible for university or college grants and similar support are not therefore eligible for help from the fund. Anyone wishing to avail themselves of this fund should contact the General Secretary for further information.

CENTENARY FUND – This fund is used to promote the study of all aspects of pteridophytes – horticultural, scientific and educational, whether by amateurs, students or professional pteridologists. As such its scope is much broader and more flexible than the Greenfield Fund. Anyone wishing to avail themselves of this fund should contact the General Secretary for further information.

SPECIAL INTEREST GROUPS – There are three Special Interest Groups. For further information please send a stamped addressed envelope to the organisers:

Tree-ferns: Prof. A.C. Wardlaw, 92 Drymen Road, Bearsden, Glasgow G61 2SY.
Foreign Hardy Ferns: A.R. (Matt) Busby, 16 Kirby Corner Rd, Canley, Coventry CV4 8GD.
Filmy Ferns: S.J. Munyard, 234 Harold Road, Hastings, East Sussex TN35 5NG.

MEMBERS INFORMATION SERVICE – Members often require information and advice on many aspects of pteridophytes but are reluctant to ask or simply do not know where to obtain help. Queries from members on any aspects of the biology, identification or cultivation of ferns or fern allies should be sent, with three first class stamps, to A.R. Busby, 16 Kirby Corner Road, Canley, Coventry CV4 8GD.

READING CIRCLE – The Society operates a reading circle for several journals. The *American Fern Journal* is a quarterly publication containing much information for those seriously interested in ferns; the *Fiddlehead Forum*, which publishes many 'ferny' items of interest to the amateur grower, accompanies it. To receive these journals contact A.R. Busby, 16 Kirby Corner Road, Canley, Coventry CV4 8GD.

FOREIGN FERN SOCIETY JOURNALS HELD BY THE SOCIETY – The Society exchanges journals with many other fern societies in the world. We have a collection of journals/newsletters from societies in the United States (3), Australia (5), New Zealand, India, Switzerland and the Netherlands. If members would like to browse these, they are welcome to get in touch with the back numbers organiser for a list of our holdings. The journals can then be borrowed for just the cost of postage both ways.

BACK NUMBERS OF JOURNALS – Our back numbers are a valuable source of information pertaining to most aspects of ferns. A mixed pack of six of our journals is available for just £5 post free to whet your appetite; other back numbers of the Society's journals are available to members at reasonable prices. A full list is available from Patrick Acock, 13 Star Lane, St Mary Cray, Kent BR5 3LJ.

WORLD-WIDE WEB SITE – The URL (address) of the BPS Web site hosted by the Natural History Museum is "http://www.nhm.ac.uk/hosted_sites/bps/index.htm". The content has recently been expanded and updated.

BPS VIDEO 'BRITISH FERNS' – This twenty-five minute video shows most of the native British ferns growing in their natural habitats. It demonstrates the wide variety of size and form to be found in British ferns and the broad range of habitats they colonise. Attention is drawn to key identification characters for each species.
Schering Agriculture and the National Museum of Wales funded the video. It is available for loan, for the cost of registered postage, to interested individuals and organisations (UK only). For further details write to the General Secretary enclosing a stamped addressed envelope.

PAYMENT OF EXPENSES – The Committee has agreed a document setting out the type of expenses, and conditions of payment thereof, which may be claimed by officers and members acting on behalf of the Society. A copy of this document can be obtained from the Honorary Treasurer on request.

MERCHANDISE – Do you have a BPS sweatshirt and/or tee-shirt? These are dark green with a small BPS logo in yellow. Ties, metal badges and car stickers sporting our logo are also available. Other items for sale: greetings cards, postcards and notelets. Can't find your order form? Contact Mrs L.I. Craddock, 40 Russell Drive, Ampthill, Beds. MK45 2TX for details. Linda would also welcome suggestions for new stock.

WANTED: ARCHIVIST – The Society requires an archivist to actively maintain and enhance its collection of various archive materials, mainly photos, letters and a few sundry items. Further information is available from the General Secretary.

WANTED: INDEX COMPILER – Several volunteers have come forward in response to our request in the 1998 *Bulletin* for help with indexing the Society's journals, for which we are very grateful. However, more help is still required. If you think you could assist in any way with the preparation of indexes, we would be very pleased to hear from you. Please contact Miss Alison Paul, Botany Department, The Natural History Museum, Cromwell Road, London SW7 5BD, tel. 020-7942-5756, e-mail: a.paul@nhm.ac.uk.

WANTED: HELP WITH EDITING – Do you have publishing, editing and/or design skills? The Publications Subcommittee requires help with the preparation of the Society's publications, especially with our occasional Special Publications and leaflets. If you think that you could help the Society in any of these ways, please contact the acting Chairman of the Publications Subcommittee, Miss Josephine Camus, Botany Department, The Natural History Museum, Cromwell Road, London SW7 5BD, tel. 020-7942-5587, e-mail: j.camus@nhm.ac.uk.

ASSISTANCE REQUIRED ON BPS STANDS AT FLOWER SHOWS – The Society needs volunteers to assist at the BBC Gardeners' World Live! and Southport Flower Show. You do not need to be an expert on ferns or fern growing, just prepared to spend a few hours or a day on the stand. Further information is available from A.R. (Matt) Busby at 16 Kirby Corner Road, Canley, Coventry CV4 8GD.

THE SOCIETY'S FIRST MINUTE BOOK – The Committee is looking for a fire-proof box or deed box for the storage of the Society's first Minute Book. The dimensions of the book are 330 x 215 x 51mm (foolscap). If any member can help in any way, either by donating or making such a box, or advising us where one can be purchased, please contact the General Secretary.

REMEMBERING THE SOCIETY IN YOUR WILL – This is just a personal plea. Our sister society in the United States has quite a healthy bank balance. It is able to use this money both for grants and for keeping the cost of their journals down. When writing my will recently, I reflected on the enjoyment our Society has given me over the last twenty years and have set aside a small amount to benefit subscription costs. This is because I am worried that since I joined the average age of the members seems to have risen with my age. I would particularly like us to encourage younger members and if some help with subscription costs would help in this process, then I want to encourage it. Perhaps you too might consider this when you come to writing your own will.

Patrick Acock

IN MEMORIAM

We were sorry to learn of the death of the following members:

Mr Kenneth Adlam of Devon who joined the Society in 1969. See obituary on p.200.
Mr Frank Hanson of Herefordshire who joined the Society in 1986.
Mr John Jeffries of Norfolk who joined the Society in 1995.
Dr Roy Thompson of Wolverhampton who joined the Society in 1997.

ANNUAL GENERAL MEETING 1999

MINUTES of the 96th Annual General Meeting held at the University of Reading on Saturday 20th March 1999 at 14.00 hrs.

IN THE CHAIR: The President, Mr M.H. Rickard.

PRESENT: Mr R.G. Ackers, Mr P.J. Acock, Mrs P. Alexander, Wg Cdr E.J. Baker, Mr M. Birkett, Mr A.R. Busby, Miss J.M. Camus, Mr R.J. Cooke, Mr M.J. & Mrs L.I. Craddock, Mr J. Crowe, Dr M. Gibby, Mr A.E. Hoare, Mr G. Hoare, Dr K.H. & Mrs D.M. Holly, Miss J.M. Ide, Mr A.C. Jermy, Mr L. Kirkham, Mr A. Leonard, Mr P. Lynch, Mr H. Matthews, Mr F. McKenzie, Miss C. Mullins, Mr S. & Mrs K. Munyard, Miss R.J. Murphy, Miss A.M. Paul, Mrs B. Porter, Mr P.H. Ripley, Mr B. Stevenson, Mr A. & Mrs M. Urquhart, Prof. A.C. Wardlaw, Mr J.R. Woodhams, Mrs J. Yesilyurt.

Item 1 – APOLOGIES FOR ABSENCE: Mrs R. Baker, Mr J.A. Crabbe, Mr P. Freshwater, Mr A.C. & Mrs M. Pigott, Mr M.S. Porter, Mr R.J. & Mrs B. Smith, Prof. B.A. Thomas, Mr R.N. Timm, Mr B. & Mrs A.Wright.

Item 2 – APPROVAL OF MINUTES: Minutes of the 95th Annual General Meeting held on 12th September 1998, published in the 1998 *Bulletin* (Volume 5, no. 3), were approved.

Item 3 – MATTERS ARISING: None.

Item 4 – REPORT OF THE HONORARY GENERAL SECRETARY:

Miss J.M. Ide reminded members that from 1991 to 1998 the AGM had been held in September, the anniversary month of the Society's inaugural meeting. For administrative reasons the date for this year's and future AGMs had been changed to March. Thus all the reports at this meeting covered a shorter period of six months.

Members would have noticed a change in the Agenda from past years; all officers and Committee appointees would be presenting their own reports rather than some being encompassed in that of the General Secretary.

GRANT AWARDING FUNDS: Among the present concerns of the Committee was the need to announce the award of grants from the Greenfield and Centenary Funds when they are made, and not to wait until the publication of a report from the recipient after the work had been completed. In future, the granting of awards would be published in the *Bulletin*. Reports for publication, in an agreed form, would continue to be required and to be published in the appropriate journal of the Society.

SOCIETY ARCHIVES: The Committee continued to be concerned about the lack of proper provision for its archives. Although there was an urgent need for the appointment of an Archivist, the Committee felt that even more urgent was the need of advice and further study. A.R. Busby had accepted the responsibility to research this for the Committee.

The Society's first Minute Book contains the minutes of the Society from its inception to the early 1980s! As this was the most important and irreplaceable record of the Society, Mr Barry Wright had kindly offered to scan it onto CD ROM.

Several articles on the acceptance of patronage by His Royal Highness the Prince of Wales had appeared as a result of the press release sent to all overseas fern societies, several other botanical societies, the major gardening magazines and major daily

newspapers in Great Britain, and the BBC. No-one was responsible for maintaining a collection of cuttings and articles about the Society or matters of Society interest. It had been agreed that this would be an added responsibility of the Archivist when appointed. In the meantime, the Committee urged members to collect press and magazine articles and notes, and either keep them or send them to the General Secretary for filing.

RECORDER: The Committee had decided to re-institute the appointment of Recorder. Mr Rob Cooke had agreed to add this to his duties as Conservation Officer.

GENERAL EDITOR OF SPECIAL PUBLICATIONS: Mr A.C. Jermy, General Editor of BPS Special Publications and chairman of the Publications Subcommittee, had expressed his wish to resign due to the pressure of other work. As yet a replacement appointment had not been made.

SYMPOSIUM 2001: A small Subcommittee with responsibility for initiating the task of organising the international Symposium in 2001 had been formed under the leadership of Mr Graham Ackers. The title of the Symposium is 'Fern Flora Worldwide: Threats and Responses'.

FINALLY: The Committee had set the Society a number of tasks which would require much time and effort from the Officers of the Society, not only with regard to Constitution matters but also in terms of activities. The result should be a Society ready to begin the next century and the new millennium on a sound footing, with the potential to improve the way it is run for the benefit of members. The Committee needed to feel that it had members' support.

In subsequent discussion, A.C. Jermy enquired how the application for charity status was progressing. In reply, the Chairman reported that the examination of the implications of the Society becoming a charity and the processes that were necessary to achieve that status, had been continuing and would be considered at the next Committee meeting. The aim would be to achieve charity status by 2000.

Item 5 – REPORT OF THE HONORARY TREASURER: Mr A. Leonard presented the unaudited accounts for the year ending 31st December 1998. In addition to the notes given with the accounts, Mr Leonard commented that income from subscriptions appeared to be lower than for 1997. This was due to the accounting method and was misleading because membership was almost the same in both years. The heavy postage costs in 1998 included the postage for the 1997 *Bulletin*, which had been unavoidably late. The £1000 in the Expenses column against Booksales was a permanent loan accounted for in the assets of the Booksales' account. Considering all these points, the balance at the end of 1998 was roughly the same as that for 1997.

The accounts were approved, subject to auditing. Proposed by A.C. Jermy and seconded by K.H. Holly.

Item 6 – SUBCOMMITTEE REPORTS:

PUBLICATIONS SUBCOMMITTEE: A.C. Jermy reported that the Subcommittee had met once since the last AGM and a number of general matters were the subject of on-going discussion.

Journals: The Subcommittee has discussed methods of streamlining the electronic transfer of copy and was seeking to ascertain the most cost-effective printing process with the minimum need for proof-reading. The Subcommittee had noted that interesting material published in the Society's Special Interest Group Newsletters also merited publication in the *Pteridologist*.

Indexes to all volumes of the *Pteridologist* were needed. An index would be very useful for the *Bulletin*, as would a cumulative one to the *Fern Gazette*. A notice had been placed in the *Bulletin* asking if any one would take on indexing for the Society's journals.

Special Publications: Jimmy Dyce's manuscript on *Polystichum* had been scanned onto disc but needed some editing and reviewing by a potential user. Robert Sykes had offered to look at the manuscript. The Subcommittee was of the opinion that this book should be the first of a series and its style and content would act as a model for later books. The possibility of other books on Fern Varieties was being investigated.
The bibliographical work on early fern books by Martin Rickard and Nigel Hall was nearing completion.

Web Pages: The Society's web pages had been revised, enlarged, and technical difficulties overcome with the help of the Natural History Museum's web manager. The Society was grateful to the NHM for allowing the use of its web-site facilities, free of charge.

Other Publications: It appeared that there was no Society master set of *BPS Leaflets* and samples were being sought by the Hon. Gen. Secretary. A corporate style was being designed for future issues. The possibility of producing educational material, charts and keys, in conjunction with the Field Studies Council, was also being pursued.

Help Required: The Society needed more people to assist in producing the Society's publications. Offers of help from members with design, editing, proof-reading or publishing skills would be gratefully received. Volunteers should contact the Subcommittee c/o the Botany Department of The Natural History Museum. There was a particular need for an editor of *BPS Special Publications*.

BULLETIN EDITOR: Miss A.M. Paul stated that the 1998 *Bulletin* proclaiming the news of the Society's Royal patronage had been published on 25th January 1999. It had also featured a complete membership address list. The prompt responses to requests for copy had been greatly appreciated.

The aim was to publish future issues of the *Bulletin* in December, thus avoiding the two-week delay when printers were closed over the Christmas period. To this end, contributors were asked to submit their reports as early as possible, particularly if they were not on disc. Finally, the Editor made the usual pleas for photographs taken during meetings to be submitted for possible inclusion.

FERN GAZETTE EDITORS: Miss J.M. Camus advised that Volume 15 part 6 had been published on 22 December 1998. It was a slim issue of only 16 pages comprising three papers and four book reviews. For the second year running only one issue had been published, because there had been insufficient copy for two issues. 1999 should be a better year. Manuscripts submitted to *The Fern Gazette* were still too few for comfort especially as not all survived the refereeing system. The editor of the BPS web page had been asked to include *Instructions for Authors* on the Web page in the hope of attracting more offers of manuscripts.

A streamlined method of production was being tested which should eliminate production problems and reduce time spent proof-reading. The appearance of this journal (cover, page size) was under review as the end of Volume 15 approaches.

Following the Editor's report, there were numerous questions, suggestions and comments regarding the number of issues per year, and the quantity and quality of

content. The Editor explained the actions taken to promote the journal, including use of the Society's web page.

PTERIDOLOGIST EDITOR: B.A. Thomas predicted that there would be sufficient copy for this year's *Pteridologist* to be published in May.

BPS WORLD WIDE WEB SITE EDITOR: A.C. Pigott reported that the full site went live in January. It had been well received by members and other pteridophiles. The editor had aimed to produce it in a restrained and professional format but with high quality images. Although it contained some significant amount of material, it was still relatively small. There was much scope for expansion but this is dependent on contributors providing suitable content. The objective is to provide an attractive 'shop window' for the Society and also to contribute to the Society's reputation by being an effective and high quality source of pteridological information on the Internet. The BPS WWW site address is: "http://www.nhm.ac.uk./hosted_sites/bps/index.htm".

An e-mail list that enabled easy exchange of information and ideas on BPS matters, had also been set up and members on e-mail were encouraged to subscribe.

MEETINGS SUBCOMMITTEE: The Meetings Secretary, P.J. Acock, reported that there had been only one meeting during the period September 1998 to March 1999 and that was the meeting in the Lake District in September. It was well attended and enjoyed by all. The re-inauguration of the 'Jimmy Dyce Dining Club' at the meeting was well received, as was the combination of excellent field outings and the AGM; just like the old days!

As Subcommittee Chairman and on behalf of all Society members, P.J. Acock thanked the hard working Subcommittee members and those members of the Society who had organised the various meetings. The Subcommittee wished to hear from any member who could organise or help to lead a meeting. They would also welcome suggestions or ideas for possible meetings.

FERN VARIEITES NOMENCLATURE SUBCOMMITTEE: M.H. Rickard advised that this Subcommittee has not met in the past year. A meeting would be held in autumn 1999.

A.C. Jermy enquired how far the international registration of cultivars had progressed. M.H. Rickard replied that that was a huge and on-going task. The Subcommittee was particularly keen to get cultivars registered in the United Kingdom. The task required a professional database. Although A.R. Busby was using a standard database it was not compatible with the information held by M.H. Rickard, but the main problem concerning the task was the lack of time available for the work.

Item 7 – REPORTS OF COMMITTEE-APPOINTED OFFICERS/MANAGERS:

MEMBERSHIP SECRETARY: M. Porter reported that membership, totalling 760, remained almost exactly the same as in 1997. Of the 37 resignations, most had been brought about either by old age and subsequent lack of mobility or by changes of interest, although a small minority had felt that the Society no longer fulfilled their needs. Thirty-eight members had lapsed as a result of non-payment of membership subscriptions despite repeated reminders, and loss of interest must be assumed to be the cause. Sadly, three long-standing members of the Society had died during the year. The 78 losses were almost balanced by the recruitment of 73 new members, many of whom had joined as a result of visits to Flower Shows where the Society had been represented. It was hoped that now the Society had its own web site, membership would increase. Of the 760 members at the end of 1998, 557 were 'Ordinary' members, 62

were Family members, 12 were Students and 93 Subscribers. There were also 33 Complimentary and 3 Honorary members.

In subsequent discussion, A.C. Jermy suggested a need to increase Subscriber Membership; Miss J.M. Camus advised that B.A. Thomas has been delegated to research this need.

Conservation Officer & Recorder: R.J. Cooke reminded the meeting that last year's AGM report outlined the work then under way on the Biodiversity Action Plan. That work had continued apace, with action plans published for five pteridophytes: *Woodsia ilvensis, Trichomanes speciosum, Athyrium flexile, Pilularia globulifera* and *Lycopodiella inundata*. Of the activities planned for the coming year, perhaps the most exciting was the proposed re-introduction of *Woodsia ilvensis* to one site in England where the plant was now extinct, and to a site in Scotland where the population was just hanging on. That work would be undertaken by the Royal Botanic Garden in Edinburgh with help from English Nature and Scottish Natural Heritage, and would use plants grown from native populations. The Botanic Garden has been so successful at *Woodsia* spore germination that there might be surplus stock. If this were the case, it might be offered to *bona fide* growers to grow on in cultivation for possible use at a later stage, in return for some plants to keep permanently. Obviously the BPS Conservation Officer would ensure that BPS members are involved.

The Society had an increasing role to play in future monitoring and survey activities. One of the problems has always been the co-ordination of effort, and the collation of data. To address these issues, English Nature was currently considering funding a post to help with the co-ordination of survey and monitoring efforts between several of the specialist lower plant societies, including the BPS. Such a post would ensure that the valuable efforts of volunteers contributed to national recording and monitoring schemes, and would also be able to provide feedback to the societies on the results of their work, and on any areas requiring specific effort.

Spore Exchange: B. and Mrs A. Wright reported that for the 1999 distribution, 305 donations had been received from 29 donors. However, many taxa were in short supply and it was hoped to take steps to ensure that stocks are replenished during 1999. The average turn-around of requests had been less than seven days. Of some concern was the number of requests arriving without an SAE or International Reply Coupons. Glassine envelopes had been introduced for the distribution, as this made the task much easier. Recipients had been requested to comment on any resultant benefits or problems.

Subsequent comment from the meeting indicated that members considered the Spore Exchange to be excellent.

Plant Exchange: R. and Mrs B. Smith reported that they had received over 50 requests since September 1998. The valuable contribution made by donors was acknowledged; without them the scheme would cease to be viable. Any members having even just a few plants to spare were encouraged to consider the scheme. It was also stressed that members do not need to have plants to offer in order to participate.

Book and Journal Sales: S.J. Munyard stated that during 1998 a total of 56 mail orders were fulfilled and many books were sold direct to members at meetings. It was still difficult to obtain good secondhand material but it was hoped that members were happy with the number of new publications that had been obtained from all over the world.

P.J. Acock was finding journal sales to be erratic and highlighting their availability earlier in the year had not resulted in an increase in sales.

MERCHANDISE: Mrs L. Craddock reported that there had been a drop in sales of 17% in 1998 compared to 1997. This was despite the fact that merchandise had been taken to virtually all of the many local and national meetings attended during the year. Every effort had been made to introduce new members to the merchandise facilities, even when the goods were not displayed. The sales provide a service to members, which, although not providing a vast income, more than covers itself. It was thought that new products should be considered for inclusion in the range sold.

A.C. Wardlaw enquired whether the merchandise was advertised on the WWW Site and was told that it was not.

HORTICULTURAL INFORMATION OFFICER: A.R. Busby advised that since September 1998, he had received seven or eight letters from members and three telephone calls from non-members with various queries concerning the acquisition and cultivation of hardy ferns.

Item 8 – REPORTS FROM SPECIAL INTEREST GROUPS:

FOREIGN HARDY FERNS: A.R. Busby stated that members continued to enquire about the group. Some copy was in hand for a further newsletter. One important article was unsuitable for publication in its present form but, hopefully, would be revised in time for the next issue, which it was hoped to publish in the following few weeks.

TREE FERNS: A.C. Wardlaw reported that the Tree-Fern Special Interest Group, which had been started through the initiative of Martin Rickard in December 1995, now had 30 members. The majority were resident in the UK, but there was one in France, Germany and Hawaii, and two in Ireland and Australia.

To date, five Newsletters had been issued, with a total of 58 pages of information and pictures on growing tree-ferns in Britain and on their distribution in Australia, New Zealand, Ireland, the south of France and Madeira. In the last issue, coloured illustrations had been used for the first time and appeared to have been well received. If the group membership got much larger a strain would be placed on the allocated budget for producing and mailing a Newsletter with coloured illustrations and it might be necessary to revert to the monochrome style.

The possibility of a meeting devoted to tree-ferns had been considered but without a concrete suggestion emerging. The Society did not appear to have had a meeting that focused on tree-ferns. However, if the proposed Society excursion to New Zealand went ahead in February 2000, there would be abundant opportunities to observe several species of tree-ferns in their native habitats.

FILMY FERNS: S.J. Munyard advised that the Filmy Fern Special Interest Group, with the help of David Jacobs, intended to publish a small article giving hints and tips on growing these interesting plants. Members of the group had tried numerous methods of cultivation, some of which were proving to be very successful.

In general discussion, A.R. Busby agreed with the previously reported views of the Publications Subcommittee, that articles from the Special Interest Groups were good and that selected ones should be reprinted in the Society's journals. Such reporting might help provide sufficient material for two issues of the *Pteridologist*. It would certainly bring the articles to a wider membership. A.C. Wardlaw commented that it was

interesting to speculate why authors preferred to submit to newsletters (especially those dealing with tree-ferns) and not to journals.

Item 9 – ELECTION OF OFFICERS AND COMMITTEE MEMBERS:
The following motion by the Committee was made through the Chairman:
"In view of there being only a six month period between the AGMs in 1998 and 1999 the Committee propose that Officers and Committee members who would normally be coming to the end of their tenure should continue for a further year and therefore all Officers and Committee members should be re-elected *en bloc*."

Dr Mary Gibby proposed, and Mrs Barbara Porter seconded, that the motion be adopted. The motion was carried unanimously.

Item 10 – ELECTION OF AUDITORS: Miss J.M. Camus proposed and Dr K. Holly seconded the proposal that Mr Graham Ackers and Mr Paul Ripley be re-elected as auditors. They were elected unanimously.

Item 11 – ANY OTHER BUSINESS:

a. As an extension to the earlier discussions on the Society's investigation into obtaining Charity status, the Chairman introduced the need to seek formal AGM approval for the Committee to proceed and to take whatever action it deemed best for the Society. After discussion, Dr K. Holly proposed and M. Craddock seconded the following motion, which was carried unanimously: *"The AGM mandates the Committee to proceed with securing Charity status for the BPS."*

b. The President had great pleasure in presenting Mr A.R. (Matt) Busby with the Stansfield Medal, which he had been awarded at last year's AGM. It was an award for outstanding service to the British Pteridological Society over a period of many years. Moreover it was an award that brought great pleasure to all members of the Society.

The President, on behalf of the Society, expressed his thanks to the University of Reading and, in particular, to Dr S. Jury for the kind and excellent hospitality that had been given to the Society.

As there was no further business the President thanked members for attending.
The meeting closed at approximately 15.00 hours.

Jennifer M. Ide
Hon. Gen. Secretary

Notes to the Accounts

1. The Society had the following stocks of books at 31.12.1998 (1997 stocks in brackets): *Fern Names and their Meanings* 188 (209), *Cultivation and Propagation of British Ferns* 113 (143), *History of British Pteridology* 841 (849), *BPS Extracts and Papers* 439 (445).
2. The accounts reflect the subscriptions actually received in the year.
3. BPS Booksales had assets of £5,159.97 (£4,164.76) at 31.12.1998.
4. The Centenary Fund had 179 (182) copies of *A World of Ferns* at 31.12.1998.
5. The Society also possesses the following assets with less tangible value:
   The Membership Secretary has a printer that cost £150 in 1998.
   The Spore Exchange has a fridge that cost £200 in 1991.
   Back issues of the *Bulletin*, *Fern Gazette* and *Pteridologist* valued at approximately £3,000.
   Merchandise valued at approximately £1,500.
6. The Society made no grants in 1998.
7. The Society wrote off the following assets:
   A computer that cost £1,000 in 1992. A computer that cost £1,000 in 1996.
8. The cost for posting the 1997 *Bulletin* (approx. £600) has been included in the 1998 accounts.

FINANCIAL STATEMENT AS AT 31 DECEMBER 1998

ORDINARY ACCOUNT

(1997)	INCOME	1998
£11,825.40	Subscriptions	£10,893.50
842.74	Interest	961.93
–	Booksales	16.15
–	Spore Exchange	4.00
263.00	Merchandise	202.00
99.70	Plant Sale	–
3,002.99	GEP	–
£16,033.83	**TOTAL INCOME**	£12,077.58
	EXPENDITURE:	
2,878.34	Pteridologist	2,901.69
2,129.17	Gazette	1,140.80
1,692.00	Bulletin	3,232.65
709.38	Printing & Stationery	623.65
478.24	Administration & Postage	750.36
35.15	Subscriptions to Societies	24.10
84.18	Plant & Spore Exchanges	118.50
505.45	Meetings	931.50
565.91	Merchandise	75.50
60.00	Mapping Project	70.00
3,002.99	GEP	–
250.00	Donations	–
–	Booksales	1,000.00
–	Special Interest Groups	69.58
£12,390.81	**TOTAL EXPENDITURE**	£10,938.33
3,643.02	BALANCE for 1998	1,139.25
9,808.40	Brought forward from 1997	13,451.42
£13,451.42	**Carried forward at 31.12.1998**	**£14,590.67**

CENTENARY FUND

5,853.50	Brought forward from 1997	5,736.83
309.33	Interest	410.25
(450.00)	Grants	–
24.00	World of Ferns	24.00
£5,736.83	Carried forward at 31.12.1998	£6,171.08

GREENFIELD FUND

1,514.42	Brought forward from 1997	1,622.45
80.03	Interest	116.02
28.00	Donations	–
£1,622.45	Carried forward at 31.12.1998	£1,738.47

PUBLICATIONS ACCOUNT

3,197.25	Brought Forward from 1997	3,712.60
–	Interest	265.49
106.00	Offprints	274.58
93.80	Special Publication No. 2	68.40
280.80	Special Publication No. 3	126.00
19.35	Special Publication No. 4	44.40
15.40	Special Publication No. 5	48.25
£3,712.60	Carried forward at 31.12.1998	£4,539.72

BRACKEN – A GRANT FROM THE CENTENARY FUND

I should like to thank the trustees of the BPS Centenary fund for the contribution that I received to attend the 1999 International Bracken Conference, which was held in Manchester, 20-26 July. This was greatly appreciated as it helped cover expenses during my stay in the UK. During the conference I made two presentations, both of which dealt with bracken systematics. I am studying plant systematics and am working on my PhD under the direction of Dr P.G. Wolf (Utah State University, USA).

In his 1941 monograph on bracken, Tryon recognised a single species, *Pteridium aquilinum*, consisting of 12 varieties. Other workers, however, have suggested that there are two, to as many as six species of bracken. My first talk dealt with the taxonomic relationships between two eastern North American taxa which were treated by Tryon as var. *latiusculum* and var. *pseudocaudatum*. Using both univariate and multivariate approaches, the morphological analysis did confirm the presence of two distinct taxonomic groups. However, evidence from isozymes clearly indicated that they should be recognised as conspecific taxa. In addition, considerable geographical variation was observed within these North American populations, with a strong north-south cline observed for five isozyme loci. Furthermore, there was evidence of gene flow between the two varieties in the Piedmont of North Carolina. These findings formed the basis of my Masters thesis, which I received under the guidance of Dr K.W. Hilu (Virginia Polytechnic Institute and State University, Blacksburg, Virginia, USA).

The second talk reported the findings of a study which looked at the phylogenetic relationships of British, North American and European bracken using DNA sequences from two different chloroplast regions: *rbcL-atpB* and *rps4*. For both sets of sequences there was a very low number of variable sites, a finding which is consistent with the infraspecific treatment that these taxa are usually given. The *rbcL-atpB* region has been found in previous studies to separate individual pteridophyte species and even to distinguish between northern and southern hemisphere *Pteridium*. However, the level of variation was sufficiently low that this region was of no use in distinguishing the northern hemisphere taxa included in this study. In contrast, the *rps4* region was sufficiently variable to distinguish taxa. The common British variety *aquilinum* (which included *P. aquilinum* subsp. *fulvum* of Page and Mill) formed a distinct group, or clade. North American, Scottish (= *P. pinetorum* subsp. *pinetorum* of Page and Mill), Swedish and Russian *latiusculum* formed a distinct group as well, with the North American varieties *pubescens* and *pseudocaudatum* joining at the base of the clade. Both studies support Tryon's infraspecific treatment of these bracken taxa.

The funds from the BPS were a tremendous help toward meeting my obligations to attend the conference. Again, I am most grateful. I would also like to take this opportunity to thank Dr Liz Sheffield (University of Manchester) for all that she did to make the trip both successful and enjoyable for me.

W.D. Speer, Dept. Biology, Utah State University, Logan, Utah 84322, USA

ADIANTUM RADDIANUM 'Fritz Luthi'/'Fritz Luthii'/'Fritz Luth'

The RHS Advisory Panel on Nomenclature and Registration is seeking help in establishing the correct form of this varietal epithet. Can anyone help? Essentially this means is there anyone who can provide information on the surname of the individual after whom this plant is named? Was it Luth or Luthi? Ideally it would be helpful to know where and when the name was first published. If you have any information please contact the Panel secretary, Dr Alan Leslie, at RHS Garden, Wisley, Woking, Surrey GU23 6QB (Tel.: 01483 212327; e-mail: alanl@rhs.org.uk).

SPECIAL INTEREST GROUPS

FOREIGN HARDY FERN GROUP

A.R. Busby

Once again I must report that I have not been able to produce another edition of the Newsletter. Several new members have expressed an interest in the group during the year and their names have been added to the list. I will do my best to get something out in the near future. Enquiries to: A.R. Busby, 16 Kirby Corner Road, Canley, Coventry CV4 8GD.

TREE-FERN GROUP

A.C. Wardlaw

The Tree-Fern Group, which was started by Martin Rickard in 1995, is still in a formative stage, in the sense of not yet having held an actual meeting. Membership has continued to grow during 1999 and is now over 30, with representation in the UK and other European countries, as well as in the United States, Hawaii and Australia. This dispersion of the membership may continue to frustrate any forseeable get-together, and perhaps the future lies in the use of the Internet, as more and more members gain access thereto. The main, indeed only, Group activity so far has been the preparation and distribution of an annual Newsletter, of which No. 6 should be ready before the end of 1999. Meanwhile, news items on tree-ferns seem to be appearing with increasing frequency in the gardening and horticultural media, and also on the Internet, e.g. on the Fernet bulletin board and on various websites. The principal focus continues to be the cultivation and maintenance of tree-ferns away from their native lands, and the extent to which special habitats and winter protection may be required.

Another development during 1999 was my receiving many requests for copies of Tree-Fern Newsletters from other than signed-up members of our Group. Most came from growers of palms, where the problems of frost-hardiness and winter protection have many parallels for tree-ferns. For the future, I see these horticultural questions about tree-ferns continuing to attract much attention. In addition, I would like to get into the areas of more secure tree-fern identification (especially of immature plants) and why/how it is that tree-ferns form trunks in the first place (and can the process be accelerated by growth hormones?). So far, the genus *Blechnum* has not figured in a Tree-Fern Newsletter, yet since several species of *Blechnum* are trunk-forming, their exclusion is an oversight. I invite contributions on this and any other tree-fern topic.

Enquiries and contributions to Alastair C. Wardlaw, 92 Drymen Road, Bearsden, Glasgow G61 2SY. Please note my new e-mail address is: A.Wardlaw@btinternet.com

FILMY FERN GROUP

S.J. Munyard

Unfortunately, due to other commitments, no Newsletter has been published this year. I hope to publish early in 2000. Anyone else interested in joining this group should contact Steve Munyard at 234 Harold Road, Hastings, East Sussex TN35 5NG.

CONGRATULATIONS!

Congratulations to Alastair Wardlaw whose fern collection has been given full National Collection status by the NCCPG. Alastair's National Collection of British Ferns comprises 45 species and 90 subspecies and cultivars. The only British species that he does not have are *Cystopteris montana, Ophioglossum azoricum* and *O. lusitanicum.*

J.M. Ide

FERN GIFT FOR PRINCE OF WALES AT HIGHGROVE

Members will remember that we circulated a request for ferns to be given to His Royal Highness The Prince of Wales on the occasion of his fiftieth birthday. The momentous birthday was in November 1998 but by the nature of organising a gift from quite a few members, the ferns were not gathered together until the spring of 1999, a good season for delivery. The collection included many rare and uncommon cultivars including: large trunked specimens of *Dicksonia antarctica, D. fibrosa* and *Cyathea australis.* Ground ferns included *Polypodium australe* 'Whilharris', *Polystichum setiferum* 'Mrs Goffey', 'Gracillimum', 'Hirondelle', 'Plumoso-divisilobum Bland', 'Cristato-pinnulum', 'Plumosum Bevis', *Athyrium filix-femina* (Plumosum group), *Phegopteris hexagonoptera* and *Woodwardia martinezii*. The collection even included *Leptopteris superba*, The Prince of Wales feather, sent over especially from Australia by Chris Goudey! In total there were 51 different taxa in the gift with some plants supplied in duplicate.

I duly took the collection over on the 22nd of April and helped plant some of the tree-ferns; the ground ferns were potted up and held over for planting out in the autumn. While I was there, the Prince came out and chatted for what seemed a few minutes but was apparently nearer half an hour. He is an extremely busy man and I really appreciated the chance to chat. It's obvious that he really loves his ferns. I have subsequently heard that he remarks to David Howard, the Head Gardener, "I see there's a new frond on that one" etc.!

The garden at Highgrove is developing rapidly. In addition to the Stumpery and Wall of Gifts, mentioned in last year's *Bulletin*, the Prince is now installing a 'Fern Pyramid'. This is being designed by the same people and should be set up very shortly (autumn 1999). I cannot quite imagine what this will be like but if it is like the other fern-based features it will be wonderful. Our collection of ferns will almost certainly not be used in the pyramid, rather they will be used to supplement the other plantings and start a new fern area in what I believe is called the azalea garden. This garden is a long, narrow, walled area adjacent to the vegetable garden. It is shady and will benefit from a substantial fern planting – I look forward to seeing it when it is completed.

In the note I wrote last year I did not give details of the decorations in the Orchard Room at Highgrove at the Prince's private birthday party on the 14th of November. Apparently each table was decorated with a mini-stumpery, with a *Dicksonia antarctica* as the centre piece. Each tree-fern had a trunk from four to ten feet tall. I know, I hired the plants for the occasion! Included in each 'stumpery' were a lot of ground ferns, predominantly polypodiums as they were at their best in the autumn. Unfortunately, I did not see the end result but by all accounts it was a fantastic sight. The decorations were a surprise for the Prince planned by his friends and staff; his love of ferns is obviously well known in the royal household!

Martin Rickard

CODE OF CONDUCT

for the conservation and enjoyment of wild plants

The above code has been published this year by the Botanical Society of the British Isles. For those BPS members who are not also BSBI members, the main points relating to pteridophytes are outlined here. Members are urged to follow these guidelines. Although the information provided here relates only to the British Isles, similar legislation exists abroad. Members are urged to follow the same standards abroad as they do at home, and always to act within local legislation.

Copies of the full text are available from the BSBI at The Natural History Museum.

Legal protection

All wild plants are protected by law in the United Kingdom. Under the Wildlife and Countryside Act 1981, it is illegal to uproot any plant without permission from the landowner or occupier. Similar protection is given to plants in Northern Ireland under the Wildlife (Northern Ireland) Order, 1985. Furthermore, many nature reserves, including National Trust land, have bylaws in force making it illegal to pick, uproot or remove plants. Several of our rarest plants are specifically protected under Schedule 8 of the Wildlife and Countryside Act against intentional picking, uprooting and destruction, unless damage is a result of a lawful activity and could not reasonably have been avoided.

The pteridophytes listed on Schedule 8 are *Cystopteris dickieana, Equisetum ramosissimum, Ophioglossum lusitanicum, Trichomanes speciosum* (including its gametophytic form), *Woodsia alpina* and *W. ilvensis*. In Northern Ireland *Gymnocarpium dryopteris, Lycopodiella inundata, Pilularia globulifera, Polystichum lonchitis* and *Trichomanes speciosum* are similarly protected. In the Republic of Ireland the following pteridophytes are specifically listed: *Asplenium obovatum, A. septentrionale, Cryptogramma crispa, Gymnocarpium robertianum, Pilularia globulifera* and *Trichomanes speciosum*.

Responsible conduct

Collecting small amounts of plant material for private study, research or as voucher specimens is usually acceptable, except in the case of protected or rare species. However, no collecting of any plant material should be undertaken on a nature reserve or protected site without first obtaining permission, and in no circumstances should the bulk of a population be collected.

Habitat conservation

Rare plants are often rare because they require specific conditions, and unintentional damage to their habitats can easily occur. A particular threat is soil compaction. Should you visit a rare plant then please avoid doing anything which will alter the site conditions, such as disturbing the surrounding vegetation for photographic purposes, or excessive trampling of surrounding vegetation.

Introducing plants to the wild

It is an offence to introduce certain plant species into the wild. However, none of the listed species are ferns. Nevertheless, non-native plants should never be introduced into the wild, and one fern, *Azolla*, is now becoming a pest on some nature reserves in SE England.

Rob Cooke
Conservation Officer

OBITUARY

KENNETH W.H. ADLAM 1912 – 1999

Kenneth did not join the Society until 1969 and he attended few meetings, with the exception of regional meetings organised by Mary Potts. He was nevertheless a committed member and an important part of the recent history of fern growing. He closely followed the Society, avidly reading the journals, collected fern books, but above all he collected ferns, building his collection into the National Collection of hardy ferns for the NCCPG.

Kenneth's parents were keen on ferns, particularly his mother, but sadly they do not seem to have joined the Society. They lived in the Reading district and it is tempting to think that they may have been in touch with those two local pre-war stalwarts of the Society, T.E. Henwood and Dr F.W. Stansfield. Also of course they would have had Taylors nursery, which specialised in ferns, on their doorstep. Kenneth was therefore brought up in a somewhat ferny environment. Although I don't think he grew on any of his parents' plants.

His working life was extremely full. For many years he was in India; initially he worked in research for Brooke Bond teas, eventually becoming a director. When war broke out he had to move into the services, spending his time in the navy and eventually serving as a Lieutenant Commander on a mine-sweeper between Burma and India. After the war he returned to India, this time to the south, in Mysore, where he ran his own coffee estate pioneering 'Robusta' coffee. By now he was married to Dolsheen who hankered after Ireland, so in 1952 the family moved to County Wicklow, but Kenneth could not settle and the next year they moved back to England near Henley and bought William Smiths, the secondhand bookshop in Reading. I remember buying George Eberle's book on central European ferns from Kenneth's shop back in the late 1960s, although I do not think I met Kenneth, but imagine my amusement to discover several years later that Kenneth had not got a copy!

During his time in Reading Kenneth diversified into selling new books on university campuses in association with Blackwells. He met Henry Schollick, a future Society President, who was a director of Blackwells and the two became friends and I suspect Henry was the catalyst who persuaded Kenneth to join the Society.

In due course Kenneth retired to central Devon and set up a wonderful garden at Witheridge where he entertained south-west members on several occasions. This was a huge garden and subsequently he had to 'down size', so he and Dolsheen moved to Kings Gatchell near Ottery St Mary. Here Kenneth set about building up one of the most incredible gardens I have ever seen. He collected ferns avidly, and I think they were his favourite group of plants, but his tastes were wide and the range of plants in the garden covered alpines to hollies and just about everything in between. The garden was frequently open for the National Gardens Scheme and became very well known. The crowning glory was probably the appearance of John Kelly's book *Ferns in your garden* in 1991. It was dedicated to Kenneth and Dolsheen and featured many photographs of their garden.

I will always remember the warm welcome given to visitors to Kings Gatchell. Kenneth loved to show visitors the garden and argue over the names of many of his plants, while Dolsheen would get the tea ready and make a fuss of any babies amongst the visitors! They were wonderful hosts. On occasions he joined me in the field hunting fern

varieties; he loved our trip to Chudleigh Rocks south-west of Exeter, where we found some good Semilacerum forms of *Polypodium australe*.

Dolsheen died a few years ago and since then Kenneth had lived on his own, maintaining the National Collection and the National Garden Scheme openings up to the end. He was very lucky to have two BPS members, Brian and Rosemary Norton, living at the end of his garden, and they kept an eye on him. It is their garden that is featured on the dust jacket of John Kelly's book.

A few weeks before his death Kenneth rang me up and asked if I would like his ferns. Of course I said yes. I asked if I would need a van or if the car would do and Kenneth assured me the car would have ample space. Pity I listened! I only got a fraction of his plants, a large number are still in the garden and they will hopefully thrive there for many, many years.

I am indebted to Rosemary Pannel, Kenneth's daughter for kindly supplying me with much of the background information given here.

Martin Rickard

GROUP OF EUROPEAN PTERIDOLOGISTS (GEP) EXCURSION

Bayerischer Wald and Böhmerwald, SE Germany/Czech Republic – 29 August – 3 September

Patrick Acock

Karsten Horn of the Staatliches Museum, Karlsruhe, organised this splendid meeting in Bavaria. Numbers attending this year were a little lower than we normally expect but were supplemented by a few of Karsten's friends and colleagues, all of whom were excellent botanists and very patient tutors. Pteridologists came from Germany, France, Belgium, Holland, Italy and the UK. Our guest this year was Daniela Dorin, from Romania, who had spent a year studying with Ronnie Viane in Gent.

The region is characterised by its wetness but we were fairly fortunate as we looked at the forest, montane, heathland and serpentine plant communities on both sides of the border. Amongst the plants of interest we were able to look at three diphasiastrums and their three hybrids, as well as *Athyrium* x *reichsteinii*, *Asplenium adulterinum* and *A. cuneifolium*.

In the evening when we had been pulled from the dining table we were treated to lectures on '*Ceterach*' and 'The Ferns of the Island of Goa' by Ronnie Viane and 'The Flora and Vegetation of Malesia' by Hans v Nooteboom.

The excellent organisation of both the field excursions and the lectures, plus the idyllic setting coupled with the very comfortable accommodation were a real credit to Karsten, his father Manfred and his friends.

Next year's GEP excursion will probably be held in Slovenia. If you would like to participate or would like to receive other information about the GEP, please contact Dr R. Viane, Dept. of Morphology, Systematics and Ecology, Section: Pteridology, K.L. Ledeganckstr. 35, B-9000 Belgium.
E-mail: ronnie.viane@rug.ac.be; Tel. & Fax: +32-9-2645057.

MEMBERSHIP LIST: ADDITIONS AND AMENDMENTS

NEW MEMBERS

** new members 1999; ** new members 2000; # members rejoined 1999*

* Archer, Mr R.C., P.O. Box 43036, Louisville, Kentucky 40253-0036, USA
* Arduino, Dr P., Dept. Environmental Science, Universita della Tuscia, Via San Camillo de Lellis, Blocco, D, Viterbo, I - 01100, Italy
* Atkins, Mr R.S., 4 Garden Walk, Edmond Castle, Corby Hill, Carlisle, Cumbria CA4 8QD
* Atkinson, Mr P., P.O. Box 14, Heckmondwike, West Yorks. WF16 OXQ
\# Basil, Mrs J., 14 Royden Lane, Boldre, Hants. SO41 8PE
* Birmingham Botanical Gardens, Attn. Mr Donald Murray (Curator), Westbourne Road, Edgbaston, Birmingham, West Midlands B15 3TR
* Borelbach, Mr A., Hohenzollernstrasse 27, Trier, 54290, Germany
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* Crawford, Mr N.D., 2 Vernal Vale, Greenmount, Western Australia 6056, Australia
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* Yeung, Dr D.K.W., Flat F, 15th Floor, Block 6, Grand Palisade, 8 Shan Yin Rd, Tai Po, Hong Kong

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Walker, Mrs D., 48 Rekayi Tangwena Avenue, Winston Park, Marondera, Zimbabwe
Welss, Dr W., Botanischer Garten, Loschgestr.3, Erlangen, D-91054, Germany

MEETINGS PROGRAMME 2000

Meetings Secretary: P.J. Acock

Meetings Subcommittee: R.G. Ackers, N.J. Hards, J.M. Ide, A. Leonard, P.H. Ripley, R.J. Cooke

Sat. 15 Jan. — **Mini Symposium on Xerophytic Ferns**
Location: The Natural History Museum, London
Leader: Graham Ackers

Fri. 11 – Fri. 25 Feb. — **Field Excursion – New Zealand**
Location: North and South Islands, New Zealand
Leaders: Jennifer Ide, Patrick Brownsey & Barbara Parris

Sat. 25 March — **Spring Indoor Meeting & AGM – London**
Location: Chelsea Physic Garden
Leader: Graham Ackers

Sat. 20 May — **Day meeting – RBG Kew**
Location: Royal Botanic Gardens, Kew, Surrey
Leader: Peter Edwards

Sat. 3 June — **Day Visit – RHS, Wisley**
Location: RHS Gardens, Wisley, Surrey
Leaders: Mike Grant & Pat Acock

Sat. 10 – Sun. 11 June — **Weekend Field Meeting – Cheshire and Clwyd**
Centre: To be announced Leader: Paul Ripley

Sat. 15 July — **Day Indoor Meeting & Fern Show – Coventry**
Location: Warwick University, Dept. of Science Education, Canley, Coventry
Leader: Matt Busby

Sat. 29 – Sun. 30 July — **Weekend Field Meeting – Cheviot Hills**
Centre: Alnwick Leader: Rob Cooke

Thurs. 17 – Sat. 19 Aug. — **Southport Flower Show: BPS Stand**
Further Info.: Matt Busby

Sat. 19 – Sun. 20 Aug. — **Weekend Field Meeting – Forest of Dean**
Centre: To be announced Leader: Nick Hards

Sat. 16 – Sun. 17 Sept. — **Photographic Workshop**
Location: To be announced Leader: Graham Ackers

March 2001 — **Guernsey**

June 2001 — **Mid Cornwall**

23-27 July 2001 — **International Symposium, Guildford**

Sept. 2001 — **Southern Lakes**

For further details of these and other meetings of interest to members, including information on accommodation, please see the separate Meetings Programme sheet. This can be sent to overseas members on request.

REGIONAL MEETINGS

For details of additional meetings in the following areas, please contact the regional organisers, enclosing a stamped addressed envelope.

Leeds & District	B. Wright, 130 Prince Rupert Drive, Tockwith, York YO5 8PU
South-East England	P.H. Ripley, North Lodge, Dene Park Gardens, Shipbourne Road, Tonbridge, Kent TN11 9NS
East Anglia	B.R. Stevenson, Willow Cottage, Cowlinge, Newmarket, Suffolk CB8 9QB
North-West England	Mrs M. Garstang, Overbeck, Pennybridge, Ulverston, Cumbria LA12 7RQ
Cornwall	Miss R.J. Murphy, Shang-ri-la, Reskadinnick, Camborne, Cornwall TR14 0BH

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